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Healthy Nutrition: An Essential Element of a Health-Promoting School

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Names	Organizations
Kenneth Bailey	WHO/HQ, Programme of Nutrition
Hamadi Benaziza	WHO/HQ, Division of Health Promotion, Education, and Communication
Silvia Dehler	WHO/HQ, Programme of Nutrition
Rachael Dixey	Leeds Metropolitan University, U.K.
Nils Farnert	Former Director-General of the European Federation of Advertising Agencies
Matthew Furner	WHO/HQ, Health Education and Health Promotion Unit
Carol Herbert	The Valley Trust, South Africa
Yasmine Motarjemi	WHO/HQ, Programme of Food Safety and Food Aid
Vivian Rassmussen	WHO/EURO, European Network of Health-Promoting Schools
Aileen Robertson	WHO/EURO, Division of Food and Nutrition
Marilyn Rice	WHO/HQ, Division of Reproductive Health (Technical Support); Family Planning and Population
David Rivett	WHO/EURO, European Network of Health-Promoting Schools
Franz Simmersbach	Food and Agriculture Organization, Nutrition Programme Service
Howell Wechsler	Centers for Disease Control and Prevention, USA

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Healthy Nutrition: An Essential Element of a Health-Promoting School

FOREWORD

Investments in schools are intended to yield benefits to communities, nations and individuals. Such benefits include improved social and economic development, increased productivity and enhanced quality of life. In many parts of the world, such investments are not achieving their full potential, despite increased enrolments and hard work by committed teachers and administrators. This document describes how educational investments can be enhanced, by increasing the capacity of schools to promote health *as they do learning*.

Education and food are fundamental conditions for health, as recognized by the World Declaration on Nutrition adopted by the FAO International Conference on Nutrition (Annex 9) and the WHO Ottawa Charter for Health Promotion (Annex 10). Health, education and nutrition support and enhance each other. For instance, healthy nutrition improves educational potential. Unhealthy nutrition and related infections can lead to diseases of malnutrition which in turn reduce the educational potential. Thus, nutrition is an **essential** element of a Health-Promoting School in order to increase the health and learning potential of students, families and other community members.

This document is part of a technical series on school health promotion prepared for WHO's Global School Health Initiative, and is published jointly by WHO with the Food and Agriculture Organization of the United Nations (FAO) and Education International (Brussels, Belgium). WHO's Global School Health Initiative is a concerted effort by international organizations to help schools improve the health of students, staff, parents and community members. Education and health agencies are encouraged to use this document to strengthen nutrition interventions as part of the Global School Health Initiative's goal: to help all schools become Health-Promoting Schools.

Although definitions will vary, depending on need and circumstance, a Health-Promoting School can be characterized as *a school constantly strengthening its capacity as a healthy setting for living, learning and working* (see box on the next page).

The extent to which each nation's schools become Health-Promoting Schools will play a significant role in determining whether the next generation is educated and healthy.

Dr Ilona Kickbusch
Director, Division of Health Promotion,
Education and Communication
World Health Organization (WHO)

Dr Desmond O'Byrne
Chief, Health Education and
Health Promotion Unit
World Health Organization (WHO)

Mr John R. Lupien
Director, Food and Nutrition Division
Food and Agriculture Organization
of the United Nations (FAO)

Health-Promoting School

A Health-Promoting School:

- fosters health and learning with all measures at its disposal.
- engages health and education officials, teachers, students, parents and community leaders in efforts to promote health.
- strives to provide a healthy environment, school health education and school health services along with school/community projects and outreach, health promotion programmes for staff, nutrition and food safety programmes, opportunities for physical education and recreation and programmes for counselling, social support and mental health promotion.
- implements policies, practices and other measures that respect an individual's self-esteem, provide multiple opportunities for success and acknowledge good efforts and intentions as well as personal achievements.
- strives to improve the health of school personnel, families and community members as well as students; and works with community leaders to help them understand how the community contributes to health and education.

Healthy Nutrition: An Essential Element of a Health-Promoting School

1. INTRODUCTION

This document introduces health promotion strategies through a Health-Promoting School to improve the health, education and development of children, families and community members. The document is based on the recommendations of the Ottawa Charter for Health Promotion (Annex 10) and will help people to apply a new approach to public health, one that creates ongoing conditions conducive to health and well-being, as well as reductions in prevailing health concerns.

While the concepts and strategies introduced in this document apply to all countries, some of the provided examples might be more relevant to certain countries than to others. It is also recognized that environmental conditions, such as technical and societal issues in the school, community and family, might not be ideal and affect the extent to which nutrition interventions can be implemented. However, a Health-Promoting School contributes to improve those conditions by fostering nutrition-related interventions even in a less healthful environment.

1.1 Why did WHO prepare this document?

The World Health Organization (WHO) has prepared this document to help individuals and groups take control over, and improve, the health of citizens in their country. It provides information that will assist individuals and groups to make a strong case for increased support and attention to healthy nutrition in schools. This document also provides information to help people understand the nature of a Health-Promoting School and how efforts to promote health and healthy nutrition might be planned, implemented and evaluated as part of the development of a Health-Promoting School.

1.2 Who should read this document?

This document can be used by:

a) Governmental policy- and decision-makers, programme planners and coordinators at local, district, provincial and national levels, especially those from the ministries of health, education and agriculture.

b) Members of nongovernmental institutions and of other organizations and agencies responsible for planning and implementing health and nutrition interventions, especially programme staff and consultants of national and international health, education and development programmes who are interested in promoting health through schools.

c) Community leaders, local residents, health care providers, social workers, development assistants, media representatives and members of organized groups, e.g. women's groups interested in improving health, education and well-being in the school and community.

d) Members of the school community, including teachers and their representative organizations, students, staff, parents, volunteers and school-based service workers.

1.3 What is healthy nutrition?

Healthy nutrition takes many forms and is understood differently in different countries and among different cultures. In general, healthy nutrition should be an integral part of daily life that contributes to the physiological, mental and social well-being of individuals (8). It is the combined effect of food, health and care. Nutritional well-being is determined by consuming **safe food** as part of an appropriate and balanced diet that contains adequate amounts of nutrients in relation to bodily requirements. The **health** and lifestyle of an individual influences the extent to which food contributes to good social, mental and physical well-being. **Care** is shown by providing time, attention and support in the household and the community to meet the food and health needs of the child and other family members (8). Furthermore, social ties are validated and maintained by the exchange of food since offering food is associated with offering love, affection and friendship (39).

1.4 What is malnutrition?

Malnutrition is any physical condition resulting either from an inappropriate or inadequate diet, such as a diet that either provides too much or too little of necessary nutrients, or from a physical inability to absorb or metabolize nutrients (5). Malnutrition can be related to various factors, such as infections which lead to poor appetite and malabsorption (59), poverty, and lack of access to food, sanitation and/or health services. Malnutrition negatively affects the quality of life and learning as well as death and disease status. A listing of important conditions of malnutrition which affect preschool- and school-age children is presented in Annex 1.

Malnutrition includes overnutrition and nutritional deficiencies as well as undernutrition (16;48;72) which impair health, intellectual activity, adaptive behaviour, education, productivity and well-being, and can induce death (1).

1.5 What are nutrition interventions?

Nutrition interventions are policies, services, learning experiences and other actions implemented by schools, individuals or groups to make healthy nutrition a way of daily life. Nutrition interventions are designed to promote health and decrease the risk of disease. In a Health-Promoting School, nutrition interventions are integrated into all aspects of the school and community life, such as the physical and psychosocial environment; a wide variety of educational opportunities; school/community projects; school health services; health promotion for school staff; counselling and social support programmes; physical exercise, recreation and sport; and food programmes.

1.6 Why increase efforts to improve nutrition?

Nutrition is vital to all human beings and to the societies that they comprise. Adequately nourished people enjoy optimal growth, health and well-being (7). Girls in particular benefit from good nutrition as their health status and eating habits have a major impact on pregnancy, lactation and nourishment of their children.

While over 800 million people are estimated to lack access to food to meet their daily basic needs for energy and protein, more than 3 billion people are deficient in essential micronutrients such as iodine, vitamin A and iron (76). Many forms of malnutrition exceed the worldwide incidence of most other diseases. For instance, more than half of the 12.2 million deaths every year of children under the age

of 5 in developing countries are associated with malnutrition (16;74). Thus, efforts are needed to make healthy nutrition accessible for everyone, everywhere and at all times.

1.7 Why focus efforts through schools?

Schools provide the most effective and efficient way to reach large portions of the population, including young people, school personnel, families and community members. Students can be reached at influential stages in their lives, during childhood and adolescence (2;6) when lifelong nutritional patterns are formed. Children at every successive year from the earliest grade through secondary school can be addressed. Schools have been given the mandate and responsibility to enhance all aspects of development and maturation of children and youth under qualified guidance.

Furthermore, schools also provide a setting to introduce nutrition information and technologies to the community and can lead the community in advocating policies and services that promote good nutrition (3). No other setting than schools offers these opportunities on as equal a basis.

1.8 How will this document help people to take control over and improve their health?

This document provides a framework for promoting health and healthy nutrition through schools. Based on the latest scientific research and programme experiences, it is designed to help people address the broad range of factors that can be modified to implement healthy nutrition as an essential element of a Health-Promoting School.

This document will help individuals and groups to:

a) **Create Healthy Public Policy:**
This document provides information that can be used to argue for increased local, district and national support for nutrition interventions and school health efforts. It also provides information that can serve as a basis for justifying decisions to increase such support.

b) **Develop Supportive Environments:**
This document describes environmental changes that are necessary to support healthy nutrition as an essential element of a Health-Promoting School, including physical and psychosocial changes.

c) **Reorient Health Services:**
This document describes how current health services can be modified and expanded to seize the opportunities afforded by Health-Promoting Schools to improve nutrition and to create more effective school health promotion programmes.

d) **Develop Personal Skills:**
This document identifies skills that young people need to develop and maintain for healthy eating. It also identifies skills needed by others to create conditions conducive to good nutrition and health through the school, family and community.

e) **Mobilize Community Action:**
This document identifies actions that should be taken by the school and community together to promote health and healthy nutrition. It identifies ways in which the school can collaborate with the community to implement such actions and to strengthen school programmes. It also provides arguments and facts that can be communicated through the mass media to call attention to healthy eating and the problem of malnutrition.

1.9 How should this document be used?

The content of sections 2 and 3 can be used to argue for healthy nutrition and nutrition interventions in schools. Section 4 helps create a strong basis for local action and for planning interventions that are relevant to the needs and circumstances of the school and community. Section 5 gives more specific details of how to integrate health promotion efforts into various components of a Health-Promoting School, and section 6 assists in evaluating efforts to make health promotion and healthy nutrition an essential part of a Health-Promoting School.

2. CONVINCING OTHERS THAT HEALTHY NUTRITION IS IMPORTANT

This section provides arguments that can be used to convince policy- and decision-makers and others of the importance of healthy nutrition during childhood and adolescence. These arguments present reasons why communities and schools both need and will benefit from nutrition interventions and health promotion programmes. **They also provide reasons to justify decisions to increase support for such efforts**.

2.1 Argument: Good nutrition strengthens the learning potential and well-being of children

Good health and nutrition are needed to achieve one's full educational potential because nutrition affects intellectual development and learning ability (19;20). Multiple studies report significant findings between the nutritional status and cognitive test scores or school performance. **Consistently, children with more adequate diets score higher on tests of factual knowledge than those with less adequate nutrition** (3;9;20). For instance, studies in Honduras, Kenya and the Philippines show that the academic performance and mental ability of pupils with good nutritional status are significantly higher than those of pupils with poor nutritional status, **independent of family income, school quality and teacher ability** (13;56;61).

2.2 Argument: Good nutrition in early life enables healthy adulthood and ageing

Among well nourished people, acute disease and illness tend to be less frequent, less severe and of shorter duration (8) thus providing increased capacities to perform daily activities. Good nutrition also fosters mental, social and physical well-being throughout life; for instance, by strengthening a positive body image and increasing the sense of personal worth (48). Healthy nutrition can also contribute to a more comfortable life by helping young people to develop healthy teeth and gums (62). Thus, good nutrition during childhood helps to lay the foundation for a healthy adulthood.

A healthy diet can also contribute to more mobility in older age. For instance, it is likely that youth is a unique time to acquire the strongest possible bones to decrease the risk of osteoporosis in old age. Diets rich in calcium can help build stronger bones while diets rich in protein and salt increase the chances of losing bone density later in life (33;46). Thus, it is important to enable children to establish or reinforce personal skills, healthy perceptions and useful knowledge in nutrition to promote their own health and the health of those they care for. It is beneficial to teach persons healthy eating patterns when they are young since eating patterns are established early in life and are difficult to change once they are developed during youth (6).

2.3 Argument: Girls will particularly benefit from nutrition interventions

Many of the problems of childbirth, such as haemorrhage, infection and obstructed labour, can be reduced in severity by adequate nutrition earlier in life (17). For instance, small stature, which may be related to undernutrition, is a well-known risk factor for obstructed labour (17;73). Anaemia, which can result from inadequate intake of iron-rich foods, lack of iron supplements or parasite infection, is known to cause about one-fifth of maternal deaths during pregnancy and childbirth (40).

Women's social roles can also be enhanced through nutrition interventions in areas where women primarily perform the role of preparing food for their families. Increases in women's nutritional knowledge help ensure better preparation, preservation, handling and distribution of foods. Increased capacity to handle their responsibilities can, in turn, enhance women's social and economic status. **Thus, ensuring schooling with effective nutrition interventions for young girls can be one of the most important and effective means of improving women's nutrition and health status because of the associated effects on health, fertility and social development** (18).

2.4 Argument: Healthy nutrition contributes to decreasing the risks of today's leading health problems

Studies show that early indicators of chronic disease begin in youth (6). For instance, avoiding obesity in childhood and youth is important because once attained, obesity tends to continue in adulthood (64), contributing to chronic diseases. Furthermore, the hardening of arteries and high blood cholesterol levels, which make a major contribution to coronary heart disease, are influenced by nutrition and lifestyle (6). Thus, adequate nutrition and physical activity are likely to have long-term health benefits (48) in reducing the growing number of diet-related, non-communicable diseases (25).

- Obesity in infants, children and adults is a major problem worldwide. The prevalence of obesity in adults is 10% to 25% in most countries of Western Europe, 20% to 25% in some countries in the Americas, up to 40% in some countries in Eastern Europe, and more than 50% in some countries in the Western Pacific. Obesity rates, which are doubling every 5-10 years in many parts of the world, are placing significant additional financial burdens on health systems to deal with the resulting problems (16). Obesity will eventually lead to chronic disorders such as diabetes, high blood pressure, high cholesterol levels, hardening of arteries and some forms of cancer. Obesity also leads to acute consequences of chronic disorders including strokes and heart attacks (17;36). **Reducing caloric intake (48) and increasing physical activity (36;65) help decrease the risk of obesity.**

- Cardiovascular Diseases include coronary heart disease which is a major cause of adult death. **The risk of cardiovascular disease can be decreased by healthy eating, especially by consuming a low fat diet** (33).

- Cancer accounts for 25% of all deaths in developed countries. It has been suggested that practicable dietary means could reduce cancer deaths by as much as 35% (66). **Eating a diet that contains plenty of fruit and vegetables in general can significantly reduce the risk of cancer** (67).

- Eating Disorders present serious threats to adolescents' health and can lead to death. **Psychological counselling, medical treatment and dietary advice can help to prevent and treat eating disorders** (48).

Nutrition education has been shown to have a significant effect in fostering healthful eating habits (37). Thus, schools can contribute to reducing these nutrition-related problems by integrating nutrition

interventions into a comprehensive approach to school health, as illustrated by the Health-Promoting School.

2.5 Argument: Education and good nutrition strengthen the economy

Adequate nutrition is necessary for children to become fit and productive adults (15), capable of fulfilling their responsibilities in life. **People who are well-nourished and educated are clearly more productive and consequently improve their own income as well as their contribution to the national economy** (19). For instance, improvements in health and well-being of women and their families through better nutrition contribute to reducing their financial burdens and time constraints. Gained time and resources can be used for income-generating and productive activities or for participating in educational, health or social engagements from which women and their families can benefit (18).

Furthermore, implementing essential public health programmes, including nutrition and health education and micronutrient supplementation, have been estimated to reduce a considerable amount of the disease burden in low- and middle-income countries (3;41). For example, using conservative assumptions, the benefits of investing in school feeding will far exceed the costs even though this is one of the most expensive possible nutrition interventions (19). In addition, nutrition interventions can contribute to reducing the substantial health care costs for nutrition-related chronic diseases and for productivity losses due to nutrition-related health problems.

2.6 Argument: Malnutrition weakens the learning potential and well-being of children

The education of millions of children throughout the world is being held back by malnutrition (19). Malnutrition in early childhood can affect school aptitudes, time of school enrolment, concentration and attentiveness. Children with a history of severe malnutrition perform less well on tests of IQ and specific factual knowledge than children in matched comparison groups (9;20). Undernourishment also impairs the ability to concentrate, learn and attend school regularly (19). A child who is malnourished and subsequently suffering from poor health cannot adequately take advantage of instructional and learning materials (9). Thus, good nutrition is needed to strengthen the learning potential of children, to enable them to learn effectively and maximize investments in education.

2.7 Argument: Malnutrition causes death and impairs the growth and development of millions of children

Malnutrition is a major factor in 54% of deaths to children under the age of 5 in the developing world. Moreover, 83% of these deaths are attributable to mild-to-moderate, rather than severe, malnutrition (16;52). Malnutrition disrupts growth and weakens the mental development of children, leading to less fit and productive adults (15).

For example:

- Protein-energy malnutrition (PEM) affects about 200 million children worldwide under the age of 5. The actual numbers of protein-energy malnourished children has recently risen in Africa and South-East Asia (16). **Protein-deficient children do not grow at their genetic potential**. They also have an increased risk of severe consequences from common childhood infections. Current and prior protein-energy malnutrition has been shown to result in poor retention of factual knowledge, poor school attendance and poor school performance (9).

- Iron deficiency affects approximately 2 000 million people in developed and developing countries (16). **Iron deficiency anaemia in infants and children can retard physical growth and delay cognitive development as well as increase susceptibility to infection** (8). Furthermore, it impairs the reproductive function of women, which puts the lives of both women and their babies at risk (8).

- Vitamin A deficiency puts over 250 million children worldwide at risk of blindness (16). Every year up to one half of a million children become partly or totally blind. Two-thirds of these children die within a few months of going blind (8). Even moderate levels of deficiency can lead to stunted growth, increased susceptibility and severity of infections and higher death rates. **Vitamin A deficiency is the single greatest cause of preventable childhood blindness** (16;40).

- Iodine deficiency is estimated to affect over 800 million people worldwide. Over 40 million people are affected by some degree of iodine deficiency-related brain damage (16). In later infancy and childhood, iodine deficiency causes mental retardation, delayed motor development, growth failure, stunting, speech and hearing defects (17). **Iodine deficiency is the single most common preventable cause of mental retardation and brain damage in children** (8;16).

All of these consequences of malnutrition compromise children's attendance and performance at school. They can be reduced by school-based interventions. Also, educating parents, parents-to-be and other family and community members as well as providing resources to correct deficiencies will help decrease the risk of developing these conditions.

3. CONVINCING OTHERS THAT NUTRITION INTERVENTIONS IN SCHOOLS WILL REALLY WORK

This section provides arguments that can be used to convince policy- and decision-makers and others of the effectiveness of nutrition interventions to promote health through schools. **They also provide reasons to justify decisions to support such efforts**.

3.1 Argument: Nutrition interventions improve children's health, learning potential and school attendance

Good health and nutrition are needed for concentration, regular school attendance and optimum class performance (9;19). **Existing research makes a convincing case that nutrition and health interventions will improve school performance** (20;22). For instance, studies in multiple countries show that the academic performance and mental ability of pupils with good nutritional status are significantly higher than those of pupils with poor nutritional status (3;9;20). This and other evidence of the positive impact of good nutrition has been so convincing that the United Nations Sub-Committee on Nutrition recommends health and nutrition programmes among efforts to increase school enrolment and learning (19).

3.2 Argument: Schools are vitally important settings through which to promote good nutrition and provide nutrition interventions

Schools offer more effective, efficient and equal opportunities than any other setting to promote health and healthy eating. They reach young people at a critical age of development in which lifestyles, including eating patterns, are developed, tested and adapted in schools and through social interactions between students, teachers, parents and others (46). Especially, lower grade levels provide excellent opportunities because eating habits are formed early in life. In addition, schools have the potential to

reach not only students but also staff, teachers, parents and community members, including young people not attending school. A Health-Promoting School provides a means to develop and manage nutrition interventions in cooperation with parents and students.

Schools are an ideal setting to promote health and healthy nutrition for several reasons (6):

- Schools reach a high proportion of children and adolescents.
- Schools provide opportunities to practice healthy eating and food safety.
- Schools can teach students how to resist unhealthy social pressures since eating is a socially learned behaviour that is influenced by social pressures.
- Skilled personnel are available to provide follow-up and guidance -- after appropriate training of students, teachers and other service personnel.
- Evaluations show that school-based nutrition education can improve eating behaviours of young persons (69).

3.3 Argument: We know how to improve health and well-being through school nutrition interventions

Evidence for many years has supported that well-managed nutrition education programmes can, at relatively low cost, bring about behaviour changes that contribute to improved nutritional well-being (14;37). For instance, studies in the United States have documented that carefully designed and implemented comprehensive health education curricula can prevent certain adverse health behaviours, including dietary patterns that cause disease (3;6). Students in behaviourally based health and nutrition education programmes have shown significant favourable changes in blood cholesterol, blood pressure and body fat. Thus, a focus on behaviour is considered a key determinant in the success of nutrition education programmes (6).

Additionally, school feeding programmes increase food availability to schoolchildren who need adequate food while promoting long-term development through support and education. While studies still continue, numerous evaluations of school feeding programmes have reported either significant increases in height and/or weight for participating children or in attendance and achievement (12). School feeding programmes also contribute to decrease hunger, which helps children concentrate on their studies.

3.4 Argument: Schools can provide interventions to improve nutrition in ways that are highly cost-effective

Cost-effective interventions in schools can prevent or greatly reduce health problems and consequences of malnutrition and foster the positive effects of nutrition. **Compared with various public health approaches, school health programmes that provide safe and low-cost health service interventions, such as screening and health education, are shown by research to be one of the most cost-effective investments a nation can make to improve health**. Furthermore, among the most cost-effective investments in health are programmes that include expanded micronutrient supplementation and increased knowledge about nutrition (41). Illustratively, a nutrition education programme in Indonesia which was based on behavioural change showed a considerably greater impact at notably lower cost than other types of interventions to which it was compared (70).

3.5 Argument: Education and healthy nutrition for girls have a positive impact on the health of families

Improving and expanding educational opportunities for girls is one of the best health and social investments (2). Improvements to girls' health will in turn improve the health of their children and families (3;41) because women generally have a major responsibility to care for others within the household. This generally involves household management, food preparation, cleaning duties, obtaining health care, education and supervision of children (17), all of which can have a significant impact on health.

Furthermore, educated girls are healthier than girls with no or little education. Educated girls and women seek appropriate prenatal care, give birth to healthier babies and bring them home to healthier environments (3;41). **Research evidence makes it clear that the single most important factor in determining a child's health and nutritional status is its mother's level of education** (2;11). Malnourished mothers tend to have low birth weight babies (1), thus perpetuating the problem of malnutrition and ill health from one generation to the next (15). For instance, a child's aptitude for formal education may be in jeopardy even prior to school enrolment if the mother suffered from maternal iodine deficiency during pregnancy (9;20). Thus, educating young mothers and mothers-to-be is one of the best ways of ensuring the nutritional future of the next generation (38). In addition, the school system may be particularly useful in trying to supplement the diet of girls before puberty to ensure the remaining growth potential is fully achieved during this critical stage (19).

3.6 Argument: Nutrition interventions in schools benefit the entire community

School health education about good nutrition also serves as a means to inform families and other community members about ways to promote well-being and prevent malnutrition. For instance, educating children about good eating habits has the potential to enhance the nutrition and health status of their younger siblings whom they may take care of (3) as well as of other family members that learn concomitantly with their children. **In addition, involving parents in nutrition interventions at the elementary school level has been shown to enhance the eating behaviour of both students and parents** (6).

Research also shows that school health education interventions can be considerably strengthened by complementary community-wide strategies (49). Thus, schools can be the centre for community enhancement projects that include programmes to improve the health and nutritional status of the community (3). Schools also provide a setting to introduce new health information and technologies to the community (2). For instance, the establishment of school canteens offering healthy food choices and practising good food safety is a way to demonstrate how to improve facilities in communities. Furthermore, partnerships between schools, organizations and businesses can benefit both the school and the community, if the partnership is mutually beneficial.

4. PLANNING THE INTERVENTIONS

Nutrition can be an entry point for building a school's capacity to plan and implement a wide range of health promotion strategies and interventions that will respond to identified needs and contribute to both health and education. Once nutrition is recognized as a priority for both education and health, the next step is to plan the interventions. This can be done by determining which strategies will have the most significant influence on health, education and development and how such interventions can be integrated with other health promotion efforts for maximum results. Interventions should enable

students, parents, teachers and community members to make healthy decisions, practice healthy behaviours and create conditions conducive to health.

This section describes important steps that should be considered in planning healthy nutrition as an essential element of a Health-Promoting School. Steps include establishing or involving a school health team and a community advisory committee, conducting a situation analysis, obtaining political and community commitments, establishing supportive school health policies and setting objectives.

4.1 School and Community Involvement in Planning

Health-Promoting Schools involve members of the school and community in planning programmes that respond to their needs and that can be maintained with available resources and commitments. Two important groups that should be involved in the planning process are a school health team and a community advisory committee.

4.1.1 School health team

A Health-Promoting School should have a designated team to coordinate and monitor health promotion policies and activities (46). Since schools should implement programmes that respond to important and relevant community needs, it is essential to involve students, parents, teachers and school management from the beginning in the planning process. When young people are involved early, they can help develop and plan a programme that responds to their specific needs and concerns. Parents and teachers can help ensure that programmes are developed in a culturally appropriate manner. Active participation also builds a sense of ownership of the programme, which enhances its sustainability and support. Since teachers and other school staff play a key role in carrying out health promotion interventions, their participation is important to ensure that interventions are developed with consideration to what they know and what they can do to establish healthy nutrition as an essential element of a Health-Promoting School.

If a school does not have a committee or group organised to address health promotion, the healthy nutrition effort can provide the opportunity to form one. The team should include a balance of students and adults with various responsibilities in the school who are committed to the idea of health and healthy nutrition. Potential members of the school health team include: teachers, administrators, students, parents and school-based service providers, such as members of food services and health services. A school health team needs to be designated with responsibility and given time and authority to lead and oversee health promotion efforts in the school. A healthy nutrition task force within that group can be responsible for planning, designing and evaluating efforts to achieve healthy nutrition.

4.1.2 Community advisory committee

It is also important to work with groups and individuals outside of the school who have an impact on students' knowledge, attitudes and behaviours related to eating. If the school or school district has a community advisory committee, it is essential to find out whether they address health promotion and nutrition. If such a committee does not exist, implementing healthy nutrition provides an opportunity to form one or to identify community advisors who can work with the school health team to improve health and nutrition. In some settings it may be beneficial to collaborate with existing community groups, such as a healthy city council or school board. Potential partners from outside the school include: representatives of local government, community residents, businesses,

vendors, media, community youth agencies, nongovernmental organizations, social service providers, health service providers, sports figures and religious leaders. Subsequently, this committee can also address other health promotion issues.

To facilitate the efforts of the school health team, the community advisory committee, or selected advisors, can help determine local needs and resources, disseminate information about health and healthy nutrition, build support across the community, encourage community involvement, help to obtain resources and funding for health and nutrition interventions, and reinforce learning experiences provided in school. The committee should include men and women with a diversity of skills who are influential in the community or district, interested in health promotion and healthy nutrition, able to mobilize support and connections, and represent the community's geographical areas as well as economic, social, ethnic and religious makeup.

The community advisory committee and the school health team should work together in planning health promotion efforts and in coordinating the various components of a Health-Promoting School, such as health education, health services, community and family involvement, etc., so that all aspects of health promotion work together for health and healthy nutrition.

4.2 Situation Analysis

A situation analysis should be considered by policy- and decision-makers and other interested groups at national, district and local levels to support the development of a Health-Promoting School and healthy nutrition. At the local level, once a school health team and community advisory committee or other responsible authorities are established, they can start planning interventions by conducting a situation analysis.

4.2.1 Purpose of conducting a situation analysis

Conducting a situation analysis will help people to better understand the needs, resources and conditions that are relevant to planning interventions (54). The necessity for an adequate situation analysis on a national, district and/or local school level is justified by several reasons:

- Policy- and decision-makers will need a strong basis for their support, especially when their policies and decisions involve the allocation of resources.
- Accurate and up-to-date data and information provide a basis for discussion, justification, setting priorities for action and identifying groups in special need for intervention, such as children belonging to underprivileged and minority groups or living in geographical areas where nutritional deficiencies are prevalent.

- Data obtained through the situation analysis are essential for planning and evaluating interventions. Data can help ensure that programmes focus on the actual health needs, experience, motivation and strengths of the target population so that interventions increase physical, social and mental well-being of students, staff, families and community members. Data also serve as a baseline to observe future trends in nutritional status and dietary behaviour.

4.2.2 Information needed

Various quantitative and qualitative information is needed for planning health promotion and nutrition interventions and for establishing a baseline for evaluation. Quantitative information includes

numbers and scores while qualitative information includes perceptions and feelings. The following information can help determine local needs concerning nutrition:

- Current **health and nutritional status** at national, regional, local and/or school level and how well it corresponds with relevant guidelines. This data should include the proportion of persons who are affected by malnutrition and infections and how severely they are affected.

- **Knowledge, attitudes, beliefs, values, behaviours and conditions related to health and nutrition, eating patterns and food customs**. For example, people might not know which foods are nutritious; poorly prepared food may influence a student's attitude about food that may be highly nutritious; local beliefs or superstitions may prevent people from eating certain foods; people might choose to ignore conditions of malnutrition because they have been with them for generations; or people might not be familiar with precautions to safely preserve food. This information is crucial to design effective health promotion strategies because values, beliefs and attitudes positively or negatively influence behaviours and conditions associated with nutrition and health. Without information about these helping or hindering forces, educational interventions are not likely to be targeted to the most relevant factors that contribute to health or malnutrition in the community and thus are unlikely to achieve the desired result.

- Available **resources** in the school and community (22). This includes determining which specific personnel and financial resources and services are available. Assessments should include the nature and extent of **existing programmes**, either through the school or community, that might help in implementing health promotion and nutrition interventions, such as deworming, oral hygiene or sport programmes. Knowing this information allows the school health team to draw on available resources for implementing new programmes or improving existing ones.

A table in Annex 2 shows some basic questions for a situation analysis and corresponding methods for collecting information. It is not all inclusive, as close collaboration between education and health officials, schools and community members is essential in assessing each particular nation, district or local school/community.

4.2.3 Data sources

In obtaining the above information it is important to collaborate with health, education and agriculture authorities; community organizations; mass media; teachers; parents; students and others to share available data sources and to avoid duplication of assessments. Data about nutritional status and levels of malnutrition may be available from the local health unit or from other local or regional organizations. Youth risk behaviour surveys or other health-related assessments could provide valuable information that can be integrated into the situation analysis. Data from existing reports and surveys should be carefully reviewed before deciding on the necessity to undertake a new survey of current needs (22).

Where data is not available, simple and well-tried assessment tools should be used to identify relevant conditions and behaviours. For instance, food frequency questionnaires can assist students and others to estimate how frequently certain foods are usually consumed (7). This information can then be compared with established guidelines. To reduce unnecessary repetitions of such assessments in schools, the collection of nutrition-related knowledge, behaviours and conditions may be most efficiently done as part of a broad survey of health-related behaviours and conditions. Information

about values, beliefs and attitudes can be obtained from students and parents through interviews, informal discussions or questionnaires, as listed in Annex 2.

4.3 Commitment and Policies

Nutrition interventions in a Health-Promoting School are most successful when a wide range of individuals and groups support the programme and become involved in it. It is important in the early stages to secure the acceptance and support of government officials, community and business leaders, educators, parents, students and the community in general.

4.3.1 Political commitment

National policies, guidelines and support from ministries of health, education, food and agriculture can be of immense help to local schools. Efforts to promote healthy nutrition through schools are most successful with the will, commitment, attention, support and action of these authorities. Collaborative relationships with other sectors and with local governments will also prove valuable.

Political commitment is evidenced by: (71)

- Public acknowledgement by government officials of the importance of nutrition for health, education and development and the importance of providing nutrition interventions.
- Clear sanction and support from the ministries of education, health, food and agriculture for health promotion and nutrition interventions.
- Designation of someone with responsibility and authority at national, district and local levels to deal with health and nutrition issues and plan interventions.
- Financial support for school health promotion and nutrition interventions.
- Training, equipment and materials to enable schools to develop and implement health and nutrition interventions.

4.3.2 Community commitment

The success of efforts to create a Health-Promoting School relies also on the extent to which people in the community are aware of and willing to support health promotion efforts. Schools need to receive input from parents and community members regarding the design, delivery, content and assessment of school health promotion, so as to respond to their concerns and to attain their commitment. Family and community members should be involved very early; for instance, through community group meetings, parent-teacher associations, formal presentations, open houses, civic clubs and religious centres. Commitment and support of many parties on various levels is needed to share expertise, facilities and resources. Partnerships of representative individuals, groups and organizations from numerous sectors, such as nongovernment, education, health, business, agriculture, communication, recreation, voluntary service and religion can demonstrate and provide commitment, resources and support for health promotion and nutrition interventions.

Community commitment is strengthened/marked by:

- Public acknowledgement of the importance of healthy nutrition by community leaders and local health, education, agricultural and other relevant organizations and businesses.

- Establishment of a designated committee for coordinating community nutrition interventions.

- Provision of local resources for health and nutrition interventions in schools.

- Coordination of interventions with other programmes in the community (e.g. food supplementation programmes, farmers' support programmes, food safety efforts).

- Efforts to attract community and media attention (e.g. through printed material, community forums, tours of places that produce or process food).

4.3.3 **Supportive school policies**

Supportive school policies provide an essential framework that guides schools in planning, implementing and evaluating efforts to promote health and healthy nutrition. School policies are brief documents that promote a clear set of school norms regarding health and nutrition. They incorporate input from all relevant constituents of the school community: students, teachers, parents, staff, administrators, food service personnel, nurses and counsellors. Policies need to meet national and local needs and standards and should be adapted to the health concerns, food preferences and dietary practices of different ethnic and cultural groups represented at school. Policies that support collaboration and coordination between the health, education, food and agricultural sectors of the government and between the school and the community are encouraged (6).

Written policies should guarantee nutrition and other health interventions for all levels of schooling, starting in the earliest grade and continuing through the last grade. Policies should address all components of a Health-Promoting School that will be modified, such as education about nutrition, food choices at the school canteen, feeding programmes, family involvement and food handling procedures. Especially important are regulations about a Health-Promoting School's environment and about health education. For instance, school policies should guarantee adequate sanitation, a pleasant eating environment and collaboration with vendors as well as provision of teacher training, learning materials and a curriculum for nutrition and health education. Specific examples of supportive school policies include:

Regulations, rules and protocols that ensure:

- ... students, parents, teachers and other school personnel are involved in planning of health promotion and nutrition interventions; for instance, through their participation on the school health team.

- ... the community advisory committee meets periodically to sustain coordination between school and community.

- ... the school curriculum includes education about nutrition as part of a sequential, comprehensive school health education programme, as an integral part of other relevant subject areas or, ideally, as a combination of both.

- ... teachers and other school personnel receive ongoing training about nutrition and food safety.

- ... all school facilities and events, including cafeterias, snack bars, rewards, staff meetings, parents' meetings and special events serve nutritious food, based on local, district and/or national guidelines (see examples in Annex 4).

- ... parents are educated about the value of healthy meals and food safety practices and about their role as reinforcers and motivators of concepts and knowledge for better eating and learning.

- ... school health services offer screening for conditions of malnutrition among students (where relevant) and report the results to teachers, parents and community members.

4.4 Goals and Objectives of Nutrition Interventions in Schools

Using the information gathered in the situation analysis, the school health team, in collaboration with the community advisory committee, can develop a vision for change and an action plan. This provides a basis for formulating goals and objectives for health promotion and nutrition interventions. Goals and objectives are necessary to make clear what the interventions should achieve. They are also essential to evaluate the extent to which the desired outcomes have been reached.

4.4.1 Goals

The goals should describe in broad terms what the programme will achieve. Nutrition intervention goals of a Health-Promoting School should aim at:

- gaining the full health and educational potential of food and nutrition sources for students and other members of the school, family and community.

- applying the school's full organizational potential to improve the nutritional status of students, staff, families and community members.

- laying a foundation of lifelong healthy eating based on favourable experiences, sufficient skills and confidence in one's capacity to practice a healthy lifestyle.

The goals are then broken down into specific outcome and process objectives so that everyone clearly understands what needs to be done, when and why. Objectives are steps for reaching the overall goal and describe outcomes in measurable terms that will help determine how successfully the goal is being reached.

4.4.2 Outcome objectives

Outcome objectives are established to define in measurable terms what is to be achieved through the interventions regarding health status of participants; and changes in knowledge, attitudes, beliefs, behaviours and conditions related to health and nutrition status. Thus, they help define and determine the success of the school-based nutrition interventions.

Examples of outcome objectives:

By (date),

- measurable health indicators related to nutrition (e.g. weight-for-height scores, blood iron levels, blood cholesterol levels) will have reached at least (value) for at least ..% of students/parents/teachers.

- knowledge, attitudes and behaviour that are relevant to students' and parents' nutrition (e.g. knowledge of dietary guidelines; attitudes about the importance of diet to health and well-being; behaviour related to food consumption) will have increased .. % over baseline.

- the percentage of (students/teachers/parents) that can demonstrate at least two methods of ensuring food safety, as given in the WHO Golden Rules for Safe Food Preparation (24), will be increased to at least .. %.

4.4.3 Process objectives

Process objectives describe what will be changed or implemented to achieve the outcome objectives. Examples of process objectives:

By (date),

- the number of Health-Promoting Schools in the (district/nation) which have implemented nutrition interventions will have increased from (number) to (number).

- at least (number) of the following interventions will be implemented to make the school environment more health-enhancing:
  - healthy meal choices are provided in the school cafeteria
  - routine messages are sent to parents about low cost healthy lunches that can be prepared for their children
  - posters that reinforce social norms related to healthy eating, such as eating with a friend, taking time to eat, etc., are displayed
  - school health services include screening for nutritional deficiencies.

- at least (number) of the following interventions will be implemented to enhance nutrition-related school health education:
  - nutrition-related learning experiences are integrated into a course of instruction in each successive grade level
  - training for teachers and other school staff on health promotion and nutrition education is held at least once per (year/semester)
  - a series of extra-curricular workshops for students, staff and parents are conducted on preparing specific healthy and safe meals and completing dietary self-assessment.

- at least ... % of (students/parents/teachers) will have implemented or participated in (number) of the following interventions to enhance healthy nutrition:
  - providing education about nutrition in a relevant subject area
  - organizing or contributing to nutrition-related school/community project
  - screening for indicators of conditions of malnutrition
  - creating an environment that enhances health and healthy nutrition.

5. INTEGRATING NUTRITION INTERVENTIONS WITHIN VARIOUS COMPONENTS OF A HEALTH-PROMOTING SCHOOL

A Health-Promoting School strives to use the school's full organizational capacity to improve the health of students, school personnel, families and community members. Such a school offers many opportunities to promote nutrition as an essential element for the attainment of health. Nutrition interventions can serve as an entry point for the development or enhancement of policies, planning groups and various components which serve as a framework for a Health-Promoting School. These components include, but are not limited to (2):

- School health education
- Healthy school environment
- School health services
- Nutrition and food programmes
- Community and family involvement and outreach
- Physical exercise, recreation and sport
- Counselling and social support
- Health promotion for school staff.

The effectiveness of interventions integrated into each of the above components is influenced by the extent to which they are supported by a variety of people, policies and trained staff. The effectiveness is also influenced by the extent to which interventions in each of these components combine with other health promotion efforts to complement and reinforce each other.

Not all schools will have the resources to integrate nutrition interventions into all of the components at one time. Therefore, each school has to establish its own priorities, in collaboration with all parties concerned, to decide the extent to which the components should be addressed. A Health-Promoting School enables students, parents, teachers and community members to work together to make such decisions. **It is more important to start with small changes that are possible than to wait until resources become available to address all of these components simultaneously**.

5.1 School Health Education

The primary goals of school health education are to help individuals adopt behaviours and to create conditions that are conducive to health (54). Thus, **the clear and precise delineation of behaviours and conditions specifically relevant to healthy nutrition is essential for the development of effective school health education efforts**. Examples of behaviours and conditions commonly identified with healthy nutrition are listed in Annex 3. These are not all inclusive, and national guidelines are available that provide advice relevant to individuals in specific countries (Annex 4). Close collaboration between education, health and food officials; the school health team; the community advisory committee; and other school and community members is necessary to identify the nutrition-related behaviours and conditions relevant to health in each community.

School health education is designed to help students acquire the knowledge, attitudes, beliefs and skills which are needed to make informed decisions, practice healthy behaviours and create conditions that are conducive to health.

- **Knowledge** provides a factual background on which to base decisions, such as knowledge about the relationship of eating and health and about planning for healthy nutrition using assessments and nutritional guidelines.
- **Attitudes** provide a personal perception for decisions, such as feeling responsible for one's own health and the health of others.

- **Beliefs** provide a conviction for decisions, such as a belief that healthy eating makes a positive difference in well-being.
- **Skills** provide a practical basis for mastering tasks and procedures related to healthy eating, such as skills for selecting and preparing healthy meals and practising food safety.

In a Health-Promoting School, school health education about nutrition addresses food, its preparation and its consumption as an essential positive and enjoyable aspect of life (46). A Health-Promoting School provides opportunities for students to practice important skills, such as decision-making about food choices. To be relevant to student needs, learning experiences should be related to food preferences and other motivational factors that guide students to improve their nutrition and that of their family and community (48). School health education about nutrition should also teach that lifestyle influences a person's food requirements. The fundamental dietary advice as expressed in Annex 4 shows the importance of eating a variety of foods, but an individual's diet must be determined with consideration to his/her lifestyle and needs.

In a Health-Promoting School, curricula are also designed to address the emotional and socio-cultural aspects of healthy eating along with informational and skill-building learning experiences. Annexes 5, 6 and 7 are illustrative recommendations of curriculum topics and educational strategies, made by WHO and curriculum planners in the United States and in Europe, to promote nutrition and healthy eating. They may be helpful to people who are responsible for identifying the knowledge, attitudes, beliefs and skills that are most relevant to health in their own communities.

School health education should be provided as a planned sequential course of instruction from the primary through the secondary levels, addressing the physical, mental, emotional and social dimensions of health. It can be taught as a specific subject, as part of other subjects, or ideally, as a combination of both (3;71). Thus, health education about nutrition should be an important part of a school health curriculum; integrated into such subject areas as science, home economics, mathematics, and agriculture; as well as included in the school's extracurricular activities. Nutrition education will enhance the overall framework of a Health-Promoting School if it is integrated into other school health components, such as physical activity and health promotion for staff, as well as in the school health education component.

Education about nutrition should be combined with efforts addressing other health issues, such as reproductive health, life skills, and alcohol and drug use prevention, so that the learning experiences will complement and reinforce each other. Linking these issues can be accomplished by organizing them into a school health education curriculum and coordinating the simultaneous or sequential presentation of related topics in different classes. Linkages of health and nutrition issues and other relevant topics can also be facilitated by co-teaching, sharing teaching resources, referring students to related lessons and involving students from different classes in group activities.

Curricula for nutrition and other health-related issues may be available through governmental and nongovernmental agencies and organizations, universities or teachers' unions. Supplemental materials specific to the local situation can also be generated by teachers and students themselves.

5.1.1 Selecting educational methods and materials for health education

Educational methods such as lectures, discussions, debates, role-plays and audio-visual aids should be designed or selected to increase knowledge, build positive attitudes and values, dispel myths, increase skills and provide support for the development of healthy lifestyles. They need to be appropriate for the developmental level of students (see Annex 6). **The selection of an educational**

method should be based on the extent to which that method is appropriate to influence the factors, such as knowledge, attitudes, skills, etc., associated with nutrition-related behaviours and conditions that contribute to health and to the prevention of malnutrition. For example, a lecture is an effective way to increase knowledge but is less effective in influencing beliefs and building skills. Discussions, debates and carefully prepared written materials can be more effective than a lecture in dispelling local myths. Practice sessions, such as cooking nutritious recipes and growing food in a school garden, can be more effective than lectures, discussions, debates and written materials in building skills. Suggested instructional strategies are included in Annex 7. These are not all inclusive. A diversity of instructional strategies is essential to effective curriculum development (27).

In selecting information to convey to students about nutrition, scientific terms and details are considered less important than practical and basic information that will enable students to make healthy food choices and to prepare foods safely. For example, it is more essential for a student to know how to prepare a healthy meal than to learn the exact grams of nutrients in different foods.

Students are more likely to adopt healthy eating patterns when they learn about these behaviours through enjoyable and participatory activities that emphasize the positive aspects of healthy eating in a context of what is relevant and important to students. Students should have repeated opportunities to taste and choose a variety of foods with high nutritional value (6). They should have learning opportunities to acquire knowledge, attitudes and skills that they can apply in school, at home and in the community (31). An action-oriented learning process (28) should also help students recognise the importance of socialization during meal times and of making appropriate choices and decisions about health and nutrition.

The types of selected activities will depend upon whether their purpose is to (55):

- **inform** - to provide information that can be understood by the students in a way that is useful
- **motivate** - to help inspire and sustain interest in developing, continuing or changing health-promoting activities or behaviours
- **enable/facilitate** - to provide tools, mechanisms, skills or other means by which the students can perform healthy behaviours
- **reinforce** - to support the continuation of a desired behaviour, activity or change process.

5.1.2 Training teachers to implement health education

Teacher training, both pre-service and in-service, is an important factor in a successful school health education programme. Teacher training should sensitise them to the concept of health promotion in schools (46).

All teachers need to receive training and accurate information to effectively address health and nutrition in their content area. Education and training should inspire and equip teachers with knowledge and skills to make a curriculum exciting in order to encourage students to build healthy eating practices and to make nutritious food choices (22). In addition, training should help teachers assess and improve their own eating practices and make them aware of behavioural messages they give as role models (6).

Teachers who are primarily responsible for nutrition education should receive specific and relevant training in implementing a selected curriculum. This training should address content and teaching

strategies. Since nutrition education involves influencing attitudes, beliefs and skills, as well as knowledge to promote healthy behaviours and conditions, teachers must be trained to use a wide variety of teaching methods. For instance, active learning methods such as discussions, debates, role plays and community education projects engage students and parents in the educational process and require their participation.

Ideally, training should be ongoing and provide time for sharing strategies. It should involve monitoring performance and evaluating health and nutrition programmes (22). Team training of teachers can help assure consistent application of health promotion and nutrition interventions in different classrooms and throughout the school. Training and learning materials for teacher training may be available through governmental and nongovernmental agencies and organizations, universities or teachers' unions. Supplemental training materials specific to the local situation can also be generated by teachers and students themselves.

5.2 Healthy School Environment

The school's environment plays a significant role in determining whether interventions to promote health and healthy nutrition will be effective and sustainable. Thus, students should have access to food of high nutritional value and to the support of persons around them to develop and maintain a healthy diet (26). A Health-Promoting School provides a safe and healthy environment that presents a realistic and attractive range of health choices to encourage a healthy lifestyle. It also helps students and others develop their physical, psychological and social potential (50). In a Health-Promoting School, the physical and psychosocial school environment should be consistent with and reinforce other health promotion efforts (22).

5.2.1 Physical environment

The physical environment includes the school building, classrooms, eating facilities, water and foods provided at school and the surroundings in which the school is situated (46). The condition of the physical environment can have a powerful effect on reinforcing or contradicting health education and nutrition interventions in the school (3). The following nutrition-related aspects of a healthy physical environment can be integrated into a Health-Promoting School, supported by related school health policies:

- **Sanitation**: In schools, the presence of clean water, safe food and sanitary facilities as well as proper waste collection and disposal are essential to good health and nutrition (3). Adequate sanitation contributes to reducing the risk for food-borne and other infections related to health and nutrition.

- **Healthy food choices**: A Health-Promoting School promotes and provides appropriate healthy and high quality foods and meals to offer opportunities for healthy choices (46).

- **Pleasant eating environment**: A pleasant eating environment in a Health-Promoting School provides sufficient space and comfortable surroundings for socializing during meal times and for enjoyment of food (46), which in turn enhance mental, social and physical health.

- **Outside vendors**: Efforts to create a health-conducive environment should also include food vendors that may be present on or near the school property, who provide an important source

of food for students. Schools should strive to gain cooperation with vendors to offer nutritious food choices to encourage the school's health promotion efforts.

- **Special facilities**: A Health-Promoting School may also have facilities to carry out practical nutrition-related activities, such as food preparation, food experiments and growing food (46).

For creating a healthy physical school environment, food services and food safety are key factors that must be addressed.

5.2.1.1 School food services

School food services need to be integrated into and coordinated with health and nutrition education and with other components of the Health-Promoting School to reinforce messages on healthy eating and ensure consistent nutrition support. The school cafeteria provides a place for students to practice healthy eating. Therefore, the school canteen needs to offer a variety of healthy food choices and limit the availability of food with low nutritional value (32) to help students apply skills taught in the classroom (6). The food supply at the school canteen should be based on national or regional dietary guidelines if these are applicable to children. Examples of dietary guidelines and food guides can be found in Annex 4. Local stores, businesses or farmers can be involved in providing nutritious food and/or food from school gardens could be used to keep costs low and to collaborate with different sectors in the community.

In addition to offering nutritious food choices, food service personnel can also be involved in other components of a Health-Promoting School. Some examples of how the activities of food service personnel can contribute to the development of a Health-Promoting School include:

- visiting classrooms and explaining how they make sure meals meet the standards of the dietary guidelines
- inviting classes to visit the cafeteria kitchen and learn how to prepare healthy meals
- involving students in planning the school menu and preparing recipes
- offering foods that reinforce classroom lessons (e.g. whole wheat bread to reinforce a lesson on dietary fibre)
- posting in the cafeteria, or where children eat, information and guidance about nutrition and its value to health
- displaying nutrition information about available foods
- giving students opportunities to practice food analysis and selection skills learned in the classroom (6).

5.2.1.2 Food safety

It is important that environmental conditions in schools ensure a safe food supply. Such conditions are supported by clean and safe water and food, safe means of waste disposal, good standards of hygiene, cleanliness, tidiness and adequate ventilation (34). These efforts should be reinforced through personnel at school. Applying rules for safe food preparation is also essential for students, teachers and service providers (24). Environmental efforts to ensure food safety should support instructional content on the same subject. While each school should follow the regulations and standards established by their respective government concerning food

safety, WHO has developed the following general Golden Rules for Safe Food Preparation (24):

1. Choose foods processed for safety.
2. Cook food thoroughly.
3. Eat cooked foods immediately.
4. Store cooked foods carefully.
5. Reheat cooked foods thoroughly.
6. Avoid contact between raw foods and cooked foods.
7. Wash hands repeatedly with soap and water.
8. Keep all kitchen surfaces meticulously clean.
9. Protect foods from insects, rodents and other animals.
10. Use safe water.

5.2.2 Psychosocial environment

The psychosocial environment relates to social and mental conditions which affect education and health. This incorporates the cultural norms and expectations regarding food and eating patterns as expressed by friends, parents and school personnel (35). A Health-Promoting School provides an ambience which respects the individual and fosters confidence in healthy choices and enjoyment of food (46). The following aspects of a healthy psychosocial environment should be integrated into a Health-Promoting School:

- **Support**: The psychosocial environment should support health-conducive perceptions and actions of all who live, work and learn in the school. It should be consistent with other health-promoting interventions in the school and classroom. For instance, the friendliness and support of school staff as well as community members involved in school projects can contribute to psychosocial support. Such support can help build confidence and self-esteem with regard to healthy eating practices.

- **Teacher role models**: One aspect of the school's psychosocial environment is the important role that teachers play as adult role models and as mentors (3). For instance, teachers can encourage students to follow a healthy way of life by demonstrating healthy eating.

- **Peer reinforcement**: Another aspect is students' influence on peers. Students can provide positive reinforcement to their peers by advising and reminding each other of healthy eating habits (32). This requires that schools provide students with sufficient time to eat and socialize.

Additional psychosocial factors will be addressed in this document in the section on counselling and social support.

5.3 School Health Services

School health services help to prevent, reduce, monitor or treat important health problems or conditions (58) as well as foster health and well-being. In a Health-Promoting School, health services work in partnership with and are provided for students, school personnel, families and community members. They should be coordinated with other services and activities at school and in the community to utilise the potential of specialist resources to provide advice and support (50) for health promotion and nutrition interventions. Schools and communities need to consider what preventive and treatment

services are best provided at school sites and avoid duplicating services available in the community that would easily be accessible for students and school personnel.

Models for providing school health services vary tremendously, not only from developed to developing countries but also among and within nations themselves (3). School health services can consist of a teacher designated to be responsible for first aid, a trained school nurse or a school health team. Such staff contribute to the well-being of students, faculty and community through caring for individuals' health and nutritional status. Their roles can include screening for indicators of malnutrition and health status, providing treatments such as micronutrient supplements and parasite medications, referring to appropriate nutritional and other services, and supplying health and nutrition information to teachers and students to help them make healthy decisions and to educate others about healthy nutrition. Institutions of higher education that train medical professionals and paraprofessionals or nongovernmental organizations may provide training for school health service providers.

Although not all schools can provide access to school health services, where resources are available, the following nutrition-related services should be considered:

5.3.1 Screening/Diagnosis

Screening and diagnosis of health and nutritional status, including conditions of malnutrition, can play an important role in planning efforts to enhance health or influence unhealthy eating habits. Nutritional screening can include food consumption surveys, which are compared to food guidelines, as well as measurements of body weight and height, which are compared to a subject's age and sex (8). In addition, blood tests can be used to diagnose micronutrient deficiencies, such as iron deficiency anaemia and indicators of nutrition-related chronic diseases, such as high blood cholesterol.

5.3.2 Referral

Based on the results of screening, the school health services can provide contact and referrals to other school services, such as feeding programmes or counselling services, and, as appropriate, to local health services and other community agencies which can respond to the identified needs (19). School health services can also provide information about where to obtain nutritious food, dietary guidelines and other appropriate services. A summary of screening results can also be referred to the school health team, teachers and parent associations to inform them about the current situation and to assist in planning.

5.4 Nutrition and Food Programmes

Children who are not adequately nourished are more likely to be absent from school, less likely to concentrate and perform well and more likely to be susceptible to infections. Therefore, a Health-Promoting School should integrate efforts to ensure students' nutritional adequacy into a variety of its health promotion interventions. Where needed, the school can provide nutritious meals or micronutrient supplements that help relieve some of these problems.

5.4.1 Feeding programmes

School feeding programmes are one example of interventions aiming at increasing food availability while promoting healthy eating (12). These programmes might provide breakfast, lunch and/or

snacks at reduced price or free of charge, providing calories, protein and micronutrients to schoolchildren without adequate food. Feeding programmes have been shown to increase weight and in some cases also school attendance and achievement (12). The composition of provided meals in terms of food items and nutritional value has been shown to play a role in educational achievement. For instance, research with elementary and high school students in Chile showed improvements in educational accomplishments with more frequent consumption of dairy products and with more nutrient intake, in particular protein and calcium (79).

5.4.2 Micronutrient supplementation

Diets deficient in essential vitamins and minerals can have an enormous health impact (40). Thus, micronutrient supplementation is another example of nutrition interventions to prevent specific deficiency diseases in individuals and to promote well-being. This intervention method supplies micronutrients separately from the normal diet. Children who receive supplements must obtain them regularly (41); therefore, schools are an appropriate place to distribute them. Micronutrient supplements can be given orally or by injection. These supplements may include vitamin A capsules to prevent blindness, iron tablets to prevent anaemia and iodized oil or iodized salt to prevent goitre and mental retardation (40). Ample evidence exists of the value of treating micronutrient deficiencies resulting in improved performance at school or work and reduced burden of illness, disability and death (40).

5.5 Community and Family Involvement and Outreach

A Health-Promoting School provides a setting which addresses health promotion and healthy nutrition by engaging students, school personnel, families and community members in collaborative and integrated efforts to improve health (58) in the school and through school/community projects and outreach.

Family and community members can be involved in Health-Promoting Schools in various ways:

- **Taking part in planning and decision-making**; for instance, participating in the school health team or community advisory committee.

- **Participating in activities and services offered through schools**; for instance, attending projects to gain specific health and nutritional knowledge and skills, such as in exhibitions, photo expositions, concerts, drama, community-wide entertainment, festivals and health fairs.

- **Providing support and resources**; for instance, supplying financial or material donations, being guest speakers or providing specialist services related to health and nutrition. Nutritionists from the community can offer nutritional assessments for students and parents, and supermarkets and farms can offer healthy food.

- **Advocating for health**; for instance, knowledge and skills acquired in a school/community project can be used by community and family members to take communal actions that will result in sustainable healthy eating practices.

Additional examples of community and family involvement and outreach are presented in Annex 8.

The family and community also provide a setting for students to understand, practice and share what they learn about health and nutrition in the classroom (22). They have the potential to support and

reinforce nutrition education and health promotion (26). Thus, it is essential that school staff, parents and community members work together in order to create conditions that allow the maximum attainment of health by all its members. Students are most likely to adopt healthy eating patterns if they receive consistent information and support through multiple channels, such as parents, peers, teachers, community members and media (6;49). Thus, a Health-Promoting School should strengthen community links and involve parents and the wider community as much as possible (46). Community members and parents, in turn, should feel that their school is open and receptive to their ideas and participation (3).

Outreach to community and family members is especially important in places where a high percentage of young people do not attend school since community outreach from schools has the potential to reach those who are not reached by schools directly. Everybody should have the opportunity to take responsibility for decisions conducive to health for themselves and others whom they care for (2).

5.5.1 Collaboration with parents and families

Health-Promoting Schools should closely collaborate with parents so that children are less likely to experience inconsistencies between suggestions and practices at home and at school. Thus, establishing dynamic, positive and productive links with families is an important part of a Health-Promoting School (46). Connections with parents can be established, for instance, during a school health fair to which parents are invited, a health-related workshop for parents, a parent-teacher meeting or a parent's visit to relevant food services at school or in the community.

Parents and other caregivers play an important role in their child's life in their roles as nurturer, teacher, disciplinarian, role model and supervisor since parents control most of the food choices available at home (6). Therefore, it is essential that they understand and reinforce what the Health-Promoting School seeks to achieve (22). The school can provide parents and family members with information, resources and skills about important principles of healthy nutrition in an effort to enhance and extend the programme in the student's home. **Improving parents' eating habits may be one of the most effective ways to promote healthy eating for their children as parents create conditions at home that are conducive or not conducive to healthy nutrition**. At the elementary school level, involving parents in nutrition-related learning experiences such as games, take-home activities and meals in school (46), is especially effective in enhancing the eating behaviours of both the students and the parents (6). Thus, parent involvement should begin early. In addition to learning about healthy eating, parents can also contribute services or resources to the school and participate in or lead community efforts that promote health and healthy nutrition.

5.5.2 Collaboration with the community

Cooperation and coordination between the school health programme and the community is likely to be most successful where there are dynamic, positive and productive school/community links (46). Schools and communities can benefit from partnerships with local businesses and representatives from agencies and organizations, such as local health departments, farmers' organizations, youth-serving agencies and local retailers (46). For instance, the school can utilise the potential of specialist services in the community for advice and support in nutrition and health matters and can actively involve community nutritionists and community health services at school. Commercial organisations and businesses can offer health-related and relevant visits to their stores, advice on healthy choices or donations in support of nutrition programmes (46). Subsequently, they may gain customers and recognition for their efforts in support of health. Constructive collaboration is especially important with national and local food businesses, supermarkets, restaurants and food

vendors in an effort to gain their support for healthy nutrition and to involve them in supplying food with high nutritional value. Partnerships may involve communication among organisations and schools, cooperation of jointly scheduled activities, coordination of resources and collaboration under a mutually agreed mission (55).

5.5.3 **Involving mass media**

Mass media can encourage new behaviours (14). They can be used on a national and local scale as well as in classrooms for health promotion and nutrition interventions. Mass media include radio, television, signboards, posters, calendars, comics, photo novels, newspapers, magazines, booklets, leaflets, audiovisual materials and traditional communication forms such as dance troupes (14). For instance, nutritional radio, television quiz programmes for schoolchildren and crossword puzzles in children's newspapers have been utilised to promote health and nutrition (11). Some materials can be distributed through more than one channel or can be used with different target groups: a nutrition teacher with a cassette recorder can play the same programme at the village well that can be broadcast over radio or discussed in class (14). Multimedia approaches that combine face-to-face and mass channels are appropriate for nutrition education because nutrition is relevant to everyone and different channels are necessary for different phases in the learning process (14).

Food advertising is also a pervasive and influential aspect of the media (11). Children have to be taught to recognize the purposes of advertising strategies such as those which provide important information and those solely promoting a particular product. Children also need to learn to recognize that some advertising may not be supportive of good nutrition. If advertising sources are involved in school/community efforts, they can also be helpful in informing people about facts of good nutrition. It is important that materials targeted towards children with dietary information and advice are consistent with official health standards and guidelines. They could be launched by various partners in the nutrition field: government agencies, industry and trade, consumer organisations, insurance companies, sport organisations, municipalities, etc. School and health representatives should be included in the planning teams for such materials and offer their special skills and experiences.

5.6 **Physical Exercise, Recreation and Sport**

Eating a healthy diet does not in itself guarantee good health. A healthy diet is however an important part of a healthy lifestyle that also includes physical exercise, not using tobacco in any form, not drinking alcoholic beverages in excess and not abusing drugs (40). All of these issues should thus be addressed by a Health-Promoting School in an organized and complementary manner.

The importance of addressing lifestyle holistically is clearly illustrated in the linkage between nutrition and active living. Physical exercise, recreation and sport help individuals acquire and maintain physical fitness and serve as a healthy means of self-expression and social development (58). Expending energy in physical exercise and sport balances the intake of energy from food, especially in regions that do not incorporate physical activity into daily living through farming, herding animals, walking long distances or other activities. Thus, physical activity and nutrition must be addressed in a complementary manner when integrated into the components of a Health-Promoting School. Nutrition interventions should stress that all children and adults should have the opportunity to attain the healthful benefits of exercise, games, dance, sport or an active lifestyle (42). In regions where overnutrition is prevalent, efforts to promote physical activity and sport should stress the benefits of reducing the risk of obesity and related disorders since negative health consequences of overweight and obesity are likely to be more

serious in sedentary than in active obese people (47). Thus, physical exercise and sport, together with healthy nutrition, can help reduce the effects of age and chronic disease on heart, lungs and muscles, reduce fatigue, mild anxiety and depression; and diminish the loss of bone calcium while creating vigour, stamina and other fundamental requirements for well-being (40).

Additionally, recreation activities and healthy nutrition can restore strength and spirits after school and work. Ball games, dances or other recreational events can be supportive of good health and offer nutritious food. In a Health-Promoting School, personnel, community members and families can participate together in planning and implementing such activities which in turn strengthen community spirit.

5.7 **Counselling and Social Support**

Maintaining and supporting the mental health of students and staff should also be addressed in a Health-Promoting School in a manner which complements and supports nutritional and physical health. An individual's psychological well-being, including self-esteem and self-confidence, is critical in maintaining physical health and the ability to make healthy decisions and avoid risk behaviours. Thus, school counselling programmes and actions to provide social support are important components of a Health-Promoting School (3) that can help students, school personnel and families in coping with difficulties, adjustments, growth and development (58).

Personal feelings and emotions influence food choices (44). For example, one's body image or low self-esteem can affect eating practices and lead to conditions of malnutrition (45;51). Achieving and maintaining desired body weight and shape can be very important for young people, especially for girls, and may lead to dieting, meal skipping and nutritional disorders (46). Consequently, counselling services or actions to provide social support can be provided by a Health-Promoting School or should be addressed through referral to a community service. This will help adolescents clarify misconceptions about their self-perception (51), which is a prerequisite to developing a healthy self-image and adopting a healthy lifestyle and good eating habits (77).

For children and adults to thrive they not only need an appropriate diet and body image but also care and nurturing. Care is the provision of time, attention, support and skills that can help meet individuals' physical, mental and social needs (40). A supportive psychosocial environment within the school can provide a buffering effect on transitions or stressful life events experienced by students and others (3). For instance, social and emotional support can be provided during meals by any member of the school community for individuals who are changing their eating behaviour (8). Social support can also strengthen students to resist social pressures to eat food of low nutritional value since eating is influenced by social forces (6). Thus, care and support services can enhance nutrition interventions by encouraging students and others to make appropriate choices about their diet, promoting self-esteem and supporting students' efforts to fulfill their physical, psychological and social potential (50).

5.8 **Health Promotion for School Staff**

A Health-Promoting School aims at promoting healthy lifestyles among all who study, work and use the school. Thus, strategies to promote health and nutrition should become an integral part of a Health-Promoting School; for instance, as part of in-service training. School health promotion programmes for staff are intended to increase their interest in health and help them acquire healthy lifestyles. Examples for nutritional health promotion include printed materials from national or local organizations, healthy

meals and guidelines provided by the school cafeteria, and workshops for staff members held by community nutritionists or others.

There are several reasons why health promotion for school personnel is important. First, healthy employees are better able to fulfill their responsibilities. Thus, health promotion activities should help them assess and improve their own eating practices (6). Second, teachers and school personnel need to be aware of and responsible for the messages they give as role models to students and others (6;46). Third, school personnel can help identify policies and practices that are needed in order to support health and well-being in a Health-Promoting School. A health promotion programme for staff can help develop those policies that support their health and find ways to change those policies that are not conducive to the health of teachers and other staff.

6. EVALUATION

Evaluation is a powerful tool that can be used to inform about and to strengthen school health programmes (43). The primary intentions of most evaluations are to provide information about the extent to which the programme is being implemented as planned and having the intended effect.

Evaluation helps to:

- **Provide information** to policy-makers, sponsors, planners, administrators and participants about the implementation and effect of the programme.
- **Provide feedback** to those involved in project planning to determine which parts of the programme are working well and which are not.
- **Make improvements or adjustments** in the process of implementation.
- **Value the effort** of schools, parents and communities.
- **Document experience** gained from the project so that it can be shared with others.

Responsible officials, such as members of the school health team or their designees, should regularly review the implementation process and the effectiveness of school health interventions. All groups affected by the programme should have the opportunity to provide input (6). Based upon the results of information gathered from evaluation, those involved in planning and implementing the interventions will make decisions concerning the programme and its various components.

6.1 Ongoing Evaluation

Evaluation is a critical element of a school-based programme that must be considered from the outset and remain ongoing. The groundwork for evaluation is laid **at the very beginning** of the implementation process when needs are assessed, objectives set and activities planned. At the same time, an evaluation plan and monitoring mechanism should be established to track progress in accomplishing the goals and objectives. **During the course of the implementation**, evaluation is necessary to monitor the process in order to make adjustments or corrections where needed. **At the end**, or after a pre-determined time period, evaluation activities assess the results and impact of the interventions and determine if the

programme needs to be improved (29). The cycle will then start again with the question of what further change is desirable.

6.2 Types of Evaluation

There are two main types of evaluation which are most relevant to evaluating school health programmes: process and outcome evaluation.

6.2.1 Process evaluation

This type of evaluation assesses how well the interventions are being implemented. Process evaluation should be ongoing to determine what interventions have actually been delivered, to whom and when. This will help to assess progress toward the programme's goals and objectives. Evaluation of the planning, development and implementation processes of the programme provides information on which mid-course adjustments can be made and documentation for others who want to learn from the implementation process. Methods for process evaluation involve tallies, record keeping by schools and interviews with teachers, school administrators and others.

Process evaluation answers questions such as:

- To what extent are the interventions being implemented the way they are intended?
- To what extent are the interventions reaching the individuals who may need them (e.g. students, parents, teachers, community members)?

6.2.2 Outcome evaluation

Outcome evaluation measures whether and to what extent outcome objectives have been achieved. It is concerned with the effect of the interventions and helps to determine whether any changes have occurred following the implementation of a programme. If the traditional pre- and post-test design is used, quantitative and qualitative indicators of nutrition-related health status, behaviours, knowledge, attitudes and/or beliefs will be compared before and after the implementation of the interventions. Thus, data items collected during the needs assessment can be of significant value to the outcome evaluation process. Quantitative data include objective numerical measures, such as weight-for-height-scores, prevalence of healthy behaviour and of malnutrition conditions. Qualitative data contain subjective perceptions and feelings, such as feeling in control of one's food choices and satisfaction about one's nutritional health status.

Outcome evaluation can demonstrate the benefits of school health promotion programmes or further need for such programmes. Evaluation results can be brought to the attention of the community and can be used to convince others to get involved in the programme.

Outcome evaluation answers questions such as:

- Are the interventions accomplishing what was expected, as expressed in the objectives?
- To what extent did students adopt healthy behaviours or create healthy conditions?

- To what extent did the programme achieve increases in students' knowledge, attitudes and skills related to healthy nutrition?

- Which specific interventions worked best? Which interventions did not work?

- Are programme planners and participants satisfied with the outcome?

- How did students feel about the interventions?

Evaluation is a programme component that is often neglected due to a lack of resources such as time, personnel or budget. For many countries with limited resources, evaluating the extent to which the planned interventions are being implemented as intended may be more feasible than evaluating their outcome on health, behaviour and related conditions, which can be costly and complex. Thus, countries with limited resources might invest in process evaluation to ensure that their intended programme is effectively implemented before attempting outcome evaluation (71).

Where resources are available, a control group could be included in the outcome evaluation to learn about the extent to which nutrition interventions influence students or others who receive them. A control group should be a school in a similar environment with initially similar characteristics such as age, gender and social status of students and comparable availability of resources in the school and community. The control group would be assessed at the time when the school that implements nutrition interventions performs its situation analysis, using the same format of assessment. After a predetermined time period, e.g. one to three years, both schools would undergo the same assessment again. The difference in changes of knowledge, attitudes, behaviour and health status between the school that implemented nutrition interventions and the control group would then be compared for each assessed item. After completion of this evaluation, the control group could also implement nutrition interventions based on this document. Evaluators must take care to use ethical standards in deciding how to establish or select the control group.

6.3 What and How to Evaluate

The following table provides an overview of the various programme components that can be evaluated with examples of quantitative and qualitative questions for process and outcome evaluation. This table is not all inclusive as programmes and objectives of health and nutrition interventions will vary with local conditions and with input from various sectors. Evaluation should be based on the objectives established in the planning phase and should be conducted in collaboration with the planning teams and other participants of the programme.

Components	Examples of possible evaluation questions
Political, community and school policies	- Does the school have a comprehensive policy on health promotion and nutrition interventions? - Is this policy implemented and enforced as written? - Are resources and responsible people designated to support nutrition interventions? - What do administrators, teachers, students and parents think of the policy?

Components	Examples of possible evaluation questions
Goals and objectives	- Are goals and objectives well-defined and do they establish the criteria against which to measure intervention activities and outcomes? - Are the objectives stated in terms of health status, behaviours or conditions to be influenced?
Target groups	- Are teachers, students, school health personnel, parents and community representatives involved in the planning of the interventions which are directed toward them? - What proportion of schoolchildren, parents or other relevant groups has been reached by health promotion and nutrition interventions? - Has the nutrition-related health status of the target groups improved?
School health education and teacher training	- What do students, teachers and parents think of the curriculum? - Are all lessons and learning activities for healthy nutrition implemented as planned? - Does nutrition education foster knowledge, attitudes, beliefs and skills needed to adopt healthy behaviour or create conditions conducive to health? - Is in-service training provided, as planned, for educators responsible for implementing nutrition education? - Do teachers feel comfortable implementing various parts of the curriculum?
Healthy school environment	- To what extent are healthy food choices offered in the cafeteria and at other school functions? - Are food safety precautions being followed? - Are students satisfied with the school's atmosphere for eating and socializing?
School health services	- To what extent have school health services provided screening for nutritional health indicators? - Are students, teachers and parents satisfied with the support provided by school health services?
Nutrition and food programmes	- To what extent are feeding and micronutrient supplementation programmes improving the health status of recipients? - Are the nutrition and food programmes demonstrating any perceptible results? What are they?
Community and family involvement and outreach	- To what extent are community members involved in nutrition interventions through schools? - Have parents changed nutrition-related practices at home as a result of school nutrition interventions? - What do parents and community members think about the health promotion and nutrition intervention efforts?
Physical exercise, recreation and sport	- How frequently do students, teachers and parents participate in physical exercise programmes or other activities of active living? - Are physical exercise and nutrition interventions coordinated and complementary?
Counselling and social support	- How satisfied are students, teachers and parents with nutrition-related counselling and social support through schools?

Components	Examples of possible evaluation questions
Health promotion for school staff	- Are nutritional health promotion activities offered for school staff? - Is health promotion for school staff helping them to adopt healthy behaviours or create conditions that foster healthy nutrition?

These programme components are subject to many methods of evaluation, and the choice depends on the outcome or process to be measured (29). Frequently used methods include questionnaires, focus groups, classroom discussions, observations and interviews. For instance, interviews can be used with teachers, students, parents, coordinators, health service workers and community members to determine the extent to which they feel the programme addresses relevant issues. Programme outreach and health status can be assessed by reviewing records and conducting interviews with school and community leaders. Medical screenings provide measurements on specific health indicators, such as blood iron and blood cholesterol levels. Concerning educational achievements, knowledge may be measured by oral or written tests, attitudes by essay questions and skills by direct observation or health habit questionnaires. The survey instruments used for the situation analysis at the start of the programme to collect baseline information may be used again to measure changes (29).

6.4 Reporting Progress and Achievements

Any evaluation is useful and complete only when its results are reported and communicated to those who need them and can use them. The value of evaluations is increased if the results are reported using repeatedly the same objective criteria to ensure continuity and comparability. Evaluation reports should be designed to contain interesting and easily understandable material for many individuals and groups, including school staff, community members and families. Evaluation results can be used to initiate discussion, debate and proposals which can contribute to further development and support for healthy nutrition and for health promotion in schools (47).

ANNEX 1: IMPORTANT CONDITIONS OF MALNUTRITION WHICH AFFECT PRESCHOOL- AND SCHOOL-AGE CHILDREN (Ref: 4, 5, 6, 7, 8, 16, 48, 75)

Condition	Characteristics	Effects on Schoolchildren
Undernutrition	not enough total food energy and nutrients are consumed	low body weight, wasting of body fat and later of muscle
Protein-energy malnutrition (PEM)	inadequate dietary intake of protein and/or energy	failure to grow and thrive, less resistance and high susceptibility to infections
Wasting	low weight for height	*see above*
Stunting	low height for age	*see above*
Marasmus	dietary deficiency of both protein and energy	*see above, (more severe)* (mainly preschool age)
Kwashiorkor	dietary deficiency of protein with adequate (or even excessive) energy intake	*see above, (more severe)* (mainly preschool age)
Iron Deficiency Anaemia	body is depleted of iron stores (reduced red blood cell count), hampering the body's ability to produce haemoglobin, which is needed to carry oxygen in the blood, most common in females	increased fatigue, shortened attention span, decreased physical and intellectual work capacity, reduced resistance to infections, impaired intellectual performance
Vitamin A Deficiency	body is low or depleted of vitamin A, which is vital for vision	night blindness and eventually total blindness, reduced resistance to infection (mainly preschool age)
Iodine Deficiency	body is low or depleted of iodine which is vital for cell differentiation and thyroid hormone synthesis	can effect brain development, learning disabilities and, when severe, grossly impair mental development; impaired reproductive performance
Overnutrition (Overweight/Obesity)	more food energy is consumed than expended, resulting in excess of body fat	elevated blood cholesterol and high blood pressure, associated with increased adult mortality
Eating Disorders	severe disturbances in eating behaviour, resulting in extreme thinness or overweight	lower self-esteem, feeling of inadequacy, anxiety, social dysfunction, depression, moodiness
Anorexia Nervosa	intense fear of becoming obese and refusal to eat, leading to a significant weight loss	*see above* (mainly adolescence)
Bulimia	compulsion to binge eat and then purge the body by self-induced vomiting or use of laxatives	*see above* (mainly adolescence)

ANNEX 2: BASIC QUESTIONS AND METHODS OF DATA COLLECTION FOR SITUATION ANALYSIS

Basic Questions	Methods for Data Collection
Which nutritional conditions significantly contribute to the health and well-being of people in the nation/community and schools? e.g. availability of low-cost nutritious foods, health-supportive eating habits	Review of existing data and information; Short questionnaire; Focus groups, or interviews with community leaders or nutrition professionals
Which nutritional conditions are causes of concern in the community? e.g. overnutrition, undernutrition	*same as above* Mortality and morbidity rates and disease burden
Which nutritional conditions are causes of concern in school-age children?	*same as above*
How prevalent are conditions of malnutrition?	*same as above* Sample survey by blood examinations; e.g. haemoglobin, blood cholesterol
To what extent are learning or health problems in schoolchildren caused or affected by nutrition? e.g. diarrhoea, anaemia, growth retardation, eating disorders, hunger	Interviews with school nurses or teachers in charge; School health records including morbidity data; Interviews with parents; Review of data available at district hospitals and local health centres
Are there data available on deaths due to malnutrition among school-age children?	Review of death statistics available at district hospitals and local health centres
Do parents and children have basic knowledge about how they can obtain and provide adequate amounts of nutritious food for themselves and their families?	Questionnaire; Focus group; Review of consumer surveys
What important behaviours and practices in schoolchildren and their families affect their nutrition status and food safety practices?	*same as above* Observation; Problem-solving discussions
What common attitudes, beliefs and customs of teachers, parents and children affect their nutrition status and food safety practices?	*same as above*
What kind of human and physical resources and capacities exist on the school and community level to provide nutrition interventions?	Observation; Interview with school and community leaders; Review of available data
Are nutrition interventions being implemented in the community?	Observation; Interview with community leaders; Review of available data
Are education, health or other relevant interventions being implemented in schools into which nutrition interventions could be integrated? e.g. helminth reduction efforts, family life education, life skills	Interview with school and community leaders; Review of available data

ANNEX 3: COMMON BEHAVIOURS AND CONDITIONS RELATED TO HEALTHY EATING

Behaviours:

- Eating behaviours which enhance health and learning abilities and reduce malnutrition (7):

  - Eating a variety of mostly cereal foods/breads, vegetables and fruit
  - Choosing whole grain foods and fresh produce
  - Eating foods containing important vitamins and minerals such as vitamin A, vitamin C, Iron, Iodine
  - Using sugar, fat and salt in moderation
  - Choosing a low-fat diet
  - Drinking adequate amounts of safe water for health and thirst-quenching
  - Exclusively breast-feeding infants up to four to six months of age (40)

- Eating behaviours which enhance physical, social and mental health:

  - Enjoying regular meals
  - Eating with family and friends to reaffirm social ties (39)
  - Balancing food intake with physical activities for fitness and weight management
  - Eating in moderation
  - Breast-feeding of infants

- Food safety behaviours which help avoid food-borne infections (24):

  - Washing hands and food thoroughly and keeping table surfaces and cooking utensils clean
  - Cooking food thoroughly and eating cooked foods immediately
  - Storing and reheating left-over cooked foods thoroughly
  - Protecting foods from insects, rodents or other animals
  - Using safe water
  - Breast-feeding of infants

Conditions:

- Conditions which enhance safe and healthy eating:

  - Availability of safe water and waste disposal
  - Access to low-cost healthy food
  - Social support for healthy eating

ANNEX 4: EXAMPLES OF DIETARY GUIDELINES AND FOOD GUIDES FOR THE GENERAL PUBLIC

(Adapted from FAO Food-Based Dietary Guidelines and Dietary Guides. 1998) (7; 80) *If countries have specific guidelines for children, those should be preferably consulted.*

Country Guidelines/Food Guides

Canada

-Enjoy a VARIETY of foods.
-Emphasise cereals, bread and other grain products.
-Choose lower-fat dairy products, leaner meats and foods prepared with little or no fat.
-Achieve and maintain a healthy body weight by enjoying regular physical activity and healthy eating.
-Limit salt, alcohol and caffeine.

China

-Eat a wide variety of foods, cereal/grain should be the main food.
-Eat more vegetables, fruits and potatoes (including sweet potatoes, cassava).
-Take milk, soybeans and their products every day.
-Increase an adequate amount of intake of fish, poultry, eggs, lean meat, reduce intake of fat and lard.
-Balance food amount intake with physical exercise, keep proper weight.
-Take food which is light, with less oil and less salt.
-If you drink (alcohol), drink a limited amount.
-Do not eat rotten food or food which has gone bad.

France

-Have regular meals.
-Eat a variety of foods.
-Fruit and vegetables should be a priority in the diet.
-Do not abuse fats.
-If you drink alcohol, drink with moderation.
-Be active.
-Weigh yourself every month.

Norway

-The joy of eating is healthy--be a friend with your food!
-Use soft, vegetable margarine or oil instead of hard margarine or butter.
-Replace full milk by light or skimmed milk, and choose other dairy products with less fat on weekdays.
-Use white or brown sauces where it is suitable, instead of melted butter or mayonnaise.
-Eat more fish of all types both for putting on bread and for dinner. Both fatty fish, such as mackerel and herring, and lean fish, such as cod and coalfish, should be eaten more often.

Philippines

-Eat a variety of foods everyday. This will make sure you are getting all the nutrients you need.
-Promote breast feeding and proper weaning. This will ensure a healthy infant.
-Achieve and maintain a desirable body weight. This will ensure proper growth and development, help keep away heart disease and other chronic degenerative diseases.
-Eat clean and safe foods. This will prevent food borne diseases in the family.
-Practice a healthy lifestyle. This will promote a long and enjoyable life.

ANNEX 5: SELECTED WHO EDUCATIONAL STRATEGIES TO PROMOTE HEALTHY EATING
(Adapted from Food, Environment and Health, a guide for primary school teachers, WHO, 1990) (78)

Food and the body

Why is food important
Foods we eat
Food and the needs of the body
Food Production: the school garden

Keeping food safe

Key issues and activities
The contamination of food
Lethal lurkers--bacteria and other microorganisms
Basic rules for safe food
Non-bacterial food-borne diseases

A safe water supply

Uses of water
Living things and water
Water and our bodies
The water cycle
Sources of water
Water sources in the community
Making water safe

Safe collection and disposal of waste

Excreta and other liquid wastes
Safe places to defecate
The disposal of solid waste

Personal hygiene

Germs, germs, germs
Looking after my body

Insects, pests and domestic animals--their role in spreading disease

Rats and mice
Houseflies
Other insect pests
Pets and other domestic animals

A healthy home environment

Keeping homes clean and tidy
Ventilation
Lighting
Prevention of accidents

ANNEX 6: SELECTED AGE-APPROPRIATE EDUCATIONAL STRATEGIES TO PROMOTE HEALTHY EATING

(Adapted from: "Guidelines for School Programs to Promote Lifelong Healthy Eating," MMWR 1996) (6)

Strategies to enhance personal characteristics that will support healthy eating

For lower elementary students

- make basic connections between food and health, such as "you need food to feel good and grow"
- identify nutritious snacks, such as fruits, vegetables, whole grain products
- increase students' confidence in their ability to make healthy eating choices by gradually building up their food selection and preparation skills and giving them practice

For upper elementary students

- explain the effects that diet and physical activity have on future health as well as on immediate concerns, such as current health, physical appearance, obesity, underweight, sense of well-being and capacity for physical activity
- teach the principles of dietary guidelines and instill pride in choosing to eat meals and snacks that comply with these principles
- help students identify foods high and low in fat, saturated fat, cholesterol, sodium, added sugars and fibre
- teach the importance of balancing food intake and physical activity
- teach the importance of eating adequate amounts of fruits, vegetables and whole grains
- help students increase the value they place on health and their sense of control over food selection and preparation
- increase students' confidence in their ability to make healthy eating choices by gradually building up their food selection and preparation skills and giving them practice
- have students analyse food preferences and factors that trigger eating behaviours

For middle and high school students

- explain the effects that diet and physical activity have on future health as well as on immediate concerns, such as current health, physical appearance, obesity, underweight, eating disorders, sense of well-being and capacity for physical activity
- have students identify reasons to adopt healthy eating and physical activity patterns
- teach the principles of dietary guidelines; instill in students pride in choosing to eat meals and snacks that comply with these principles
- teach students how to identify foods high and low in fat, saturated fat, cholesterol, sodium and added sugars
- teach students how to identify foods that are good sources of fibre, complex carbohydrates, calcium, iron, vitamin A, vitamin C and folate
- teach the importance of balancing food intake and physical activity
- teach the effects of unsafe weight-gain and weight-loss methods
- help students increase the value they place on health and their sense of control over food selection and preparation
- increase students' confidence in their ability to eat healthily by gradually building up their skills and giving them practice
- help students examine what motivates persons to adopt particular eating habits; have students keep a food diary noting what cues their own eating behaviour such as mood, hunger, stress or other persons

ANNEX 6 (cont.)

Strategies to enhance behavioural capabilities that will support healthy eating

For lower elementary students

- provide various nutritious foods for students to taste in an enjoyable social context
- let students prepare simple snacks
- encourage students try unfamiliar and culturally diverse foods with levels of fat, sodium, sugar, calories and fibre consistent with their needs.

For upper elementary students

- provide opportunities for students to taste a variety of foods with high nutritional value in an enjoyable social context
- let students prepare nutritious snacks or simple meals
- encourage students to try unfamiliar and culturally diverse foods with levels of fat, sodium, sugar, calories and fibre consistent with their needs.
- have students select nutritious food from a store or restaurant
- teach students how to recognize the fat, sodium and fibre contents of foods
- help students record and assess their food intake
- teach students how to use nutritional guidelines and food guide models to assess their diet for variety, moderation and proportionality
- have students set simple goals for changes in eating and physical activity and devise strategies for implementing these changes and monitoring progress in reaching their goals
- when appropriate, let students practice (through role plays) encouraging parents to make healthy choices about eating and physical activity at home
- have students examine media and social influences on eating and physical activity; teach students how to respond to these pressures

For middle and high school students

- let students plan and prepare healthy meals
- have students select nutritious food in cafeteria, stores and restaurants
- teach students how to make food choices associated with health and, where appropriate, how to use nutrition labels
- teach students ways to modify recipes and prepare foods with levels of fat, sodium, sugar, calories and fibre consistent with their needs.
- help students identify incentives and reinforcements for their current eating and physical activity
- have students examine media and social inducements to adopt healthy or unhealthy eating and physical activity patterns; teach them how to respond to these pressures and let them use their new knowledge to identify their own resistance strategies
- have students analyse environmental barriers to healthy eating and physical activity; explore strategies for overcoming these barriers
- when appropriate, give students practice in encouraging parents to make healthy choices about eating and physical activity at home
- teach students to record their food intake, then have them assess and compare their diets with the standards in dietary guidelines and food guide models; have them assess and compare their intake of key nutrients such as calcium and iron with the intake recommended by the public health service
- have students set goals for healthy changes in eating and physical activity, identify barriers and incentives and assess alternative strategies for reaching their goals; show students how to monitor progress, revise their goals if necessary, and reward themselves for successfully attaining their goals
- teach students how to evaluate nutrition claims from advertisements and nutrition-related news stories

ANNEX 7: EXAMPLES OF CURRICULUM ADDRESSING EMOTIONAL AND SOCIO-CULTURAL INFLUENCES RELATED TO HEALTHY EATING AND SUGGESTED INSTRUCTIONAL STRATEGIES

(Adapted from: Arnhold, Wolfgang et al. Healthy Eating for Young People in Europe: Nutrition Education in Health-Promoting Schools. Draft. Ministerium für Frauen, Bildung, Weiterbildung und Sport des Landes Schleswig-Holstein, Europäische Kommission, 1997) (46)

Food and emotional development:

- development of sensory awareness; enjoyment and appreciation of foods
- food preferences
- trying new foods
- children's feelings about eating, drinking and well-being
- body-image
- social significance of food and eating
- children's own responsibilities

Eating habits and socio-cultural influences:

- children's own food and eating habits and values
- food habits and beliefs of different cultural groups
- factors influencing one's own food choice (individual, psychological, environmental, socio-cultural factors)
- variation in food habits (regional, cultural, religious)
- history of food/eating
- meal patterns (trends, snacking)
- settings for food consumption
- norms for eating behaviour/etiquette

SUGGESTED INSTRUCTIONAL STRATEGIES (27)

Communication methods (to convey knowledge)

- Lecture
- Storytelling
- Panel discussion
- Programmed instruction
- Audiovisually-aided instruction
- Computer-assisted instruction
- Guest-speaker engagements
- Demonstration
- Peer-teaching
- Non-directive teaching
- Individual instruction on independent student research project

Methods to influence attitudes and skills

- Open discussions
- Inquiry and experimentation
- Field trips to community resources
- Cooking of healthy recipes
- Behaviour modification
- Concept formation
- Concept-attainment
- Construction and maintenance of models (e.g. gardens)
- Competitions
- Role-playing
- Debates
- Games
- Simulation
- Modelling of behaviours
- Social problem solving
- Social learning techniques (6)

Organizational methods (to bring about community-wide changes)

- Organizing school or community groups for specific purposes
- Committee work (e.g. school nutrition committee)

ANNEX 8: EXAMPLES OF COMMUNITY AND FAMILY INVOLVEMENT AND OUTREACH

- Schools can bring together a variety of groups with varying skills and resources (3). Adult role models are important for helping young people to learn from experiences and to make healthy choices.

- Children who understand the benefits of good nutrition can share their conviction with their family and community members and invite them to the school's nutrition programme.

- Mothers and/or fathers who predominate in the role of the "health educator" and child care within the household can make a significant contribution to improving the level of understanding of healthy eating within the household and community, if adequately informed by the school or other sources.

- A community mobilization project can take a three-tiered approach: screening schoolchildren to identify the main nutritional problems affecting them, calling a parents' meeting to analyse these problems by identifying underlying causes, and agreeing on specific actions they will take collectively and individually (3).

- Drama can be used to engage students and adults in the community. It also facilitates discussion and decision-making on a nutrition-related topic (3).

- Schools can send nutrition information materials and cafeteria menus home with students (6).

- Schools can invite parents and other family and community members to periodically eat with their children in the cafeteria (6).

- Schools can invite families and community members to attend exhibitions of student nutrition projects or health fairs (6).

- Schools can offer nutrition education workshops and screening services to the community (6).

- Schools can assign nutrition education homework that students can do with their families; e.g. dietary assessments, preparing healthy recipes (6), planning meals based on nutritional guidelines.

- Schools can participate in community-based nutrition education campaigns sponsored by public health agencies or voluntary organizations (6).

- School farms, in collaboration with the community, can generate farm products for school meals or for the community, and disseminate nutritional knowledge and practical skills (11).

- Teachers and students can organize a meeting at a women's marketing collective or women's club (14).

- Health and nutrition information can be provided through visual aids and plays in a central place of the community, through the mass media and at village festivals to reach young people who do not attend school (55).

- Mature, married women could be guest speakers at local schools and talk about breast-feeding and other nutritional topics (14).

- Schools can encourage participation of volunteers in food banks or in collecting and sharing food for the socially deprived.

ANNEX 9:

WORLD DECLARATION ON NUTRITION

International Conference on Nutrition
Food and Agriculture Organization of the United Nations
World Health Organization

Rome, December 1992.

1. We, the Ministers and the Plenipotentiaries representing 159 states and the European Economic Community at the International Conference on Nutrition (Rome, December 1992) declare our determination to eliminate hunger and to reduce all forms of malnutrition. Hunger and malnutrition are unacceptable in a world that has both the knowledge and the resources to end this human catastrophe. We recognize that access to nutritionally adequate and safe food is a right of each individual. We recognize that globally there is enough food for all and that inequitable access is the main problem. Bearing in mind the right to an adequate standard of living, including food, contained in the Universal Declaration of Human Rights, we pledge to act in solidarity to ensure that freedom from hunger becomes a reality. We also declare our firm commitment to work together to ensure sustained nutritional well-being for all people in a peaceful, just and environmentally safe world.

2. Despite appreciable worldwide improvements in life expectancy, adult literacy and nutritional status, we all view with the deepest concern the unacceptable fact that about 780 million people in developing countries -- 20 percent of their combined population -- still do not have access to enough food to meet their basic daily needs for nutritional well-being.

3. We are especially distressed by the high prevalence and increasing numbers of malnourished children under five years of age in parts of Africa, Asia and Latin America and the Caribbean. Moreover, more than 2 000 million people, mostly women and children, are deficient in one or more micronutrients: babies continue to be born mentally retarded as a result of iodine deficiency; children go blind and die of vitamin A deficiency; and enormous numbers of women and children are adversely affected by iron deficiency. Hundreds of millions of people also suffer from communicable and non-communicable diseases caused by contaminated food and water. At the same time, chronic non-communicable diseases related to excessive or unbalanced dietary intakes often lead to premature deaths in both developed and developing countries.

4. We call on the United Nations to consider urgently the issue of declaring an International Decade of Food and Nutrition, within existing structures and available resources, in order to give additional emphasis to achieving the objectives of this World Declaration on Nutrition. Such consideration should give particular emphasis to the food and nutrition problems of Africa, and of Asia, Latin America and the Caribbean.

5. We recognize that poverty and the lack of education, which are often the effects of underdevelopment, are the primary causes of hunger and undernutrition. There are poor people in most societies who do not have adequate access to food, safe water and sanitation, health services and education, which are the basic requirements for nutritional well-being.

6. We commit ourselves to ensuring that development programmes and policies lead to a sustainable improvement in human welfare, are mindful of the environment and are conducive to better nutrition and health for present and future generations. The multifunctional roles of agriculture, especially with regard to food security, nutrition, sustainable agriculture and the conservation of natural resources, are of particular importance in this context. We must implement at family, household, community, national and international levels, coherent agriculture, animal husbandry, fisheries, food, nutrition, health, education, population, environmental, economic and social policies and programmes to achieve and maintain balance between the population and available resources and between rural and urban areas.

7. Slow progress in solving nutrition problems reflects the lack of human and financial resources, institutional capacity and policy commitment in many countries needed to assess the nature, magnitude and causes of nutrition problems and to implement concerted programmes to overcome them. Basic and applied scientific research, as well as food and nutrition surveillance systems, are needed to more clearly identify the factors that contribute to the problems of malnutrition and the ways and means of eliminating these problems, particularly for women, children and aged persons.

8. In addition, nutritional well-being is hindered by the continuation of social, economic and gender disparities; of discriminatory practices and laws; of floods, cyclones, drought, desertification and other natural calamities; and of many countries' inadequate budgetary allocations for agriculture, health, education and other social services.

9. Wars, occupations, civil disturbances and natural disasters, as well as human rights violations and inappropriate socio-economic policies, have resulted in tens of millions of refugees, displaced persons, war-affected non-combatant civilian populations and migrants, who are among the most nutritionally vulnerable groups. Resources for rehabilitating and caring for these groups are often extremely inadequate and nutritional deficiencies are common. All responsible parties should cooperate to ensure the safe and timely passage and distribution of appropriate food and medical supplies to those in need, in accordance with the Charter of the United Nations.

10. Changing world conditions and the reduction of international tensions have improved the prospects for a peaceful solution of conflicts and have given us an opportunity as never before to redirect our resources increasingly towards productive and socially useful purposes to ensure the nutritional well-being of all people, especially the poor, deprived and vulnerable.

11. We recognize that the nutritional well-being of all people is a pre-condition for the development of societies and that it should be a key objective of progress in human development. It must be at the centre of our socio-economic development plans and strategies. Success is dependent on fostering the participation of the people and the community and multisectoral actions at all levels, taking into account their long-term effects. Shorter-term measures to improve nutritional well-being may need to be initiated or strengthened to complement the benefits resulting from longer-term development efforts.

12. Policies and programmes must be directed towards those most in need. Our priority should be to implement people-focused policies and programmes that increase access to and control of resources by the rural and urban poor, raise their productive capacity and incomes and strengthen their capacity to care for themselves. We must support and promote initiatives by people and communities and ensure that the poor participate in decisions that affect their lives. We fully recognize the importance of the family unit in providing adequate food, nutrition and a proper caring environment to meet the physical, mental emotional and social needs of children and other vulnerable groups, including the elderly. In circumstances where the family unit can no longer fulfil these responsibilities adequately, the community and/or government should offer a support network to the vulnerable. We, therefore, undertake to strengthen and promote the family unit as the basic unit of society.

13. The right of women and adolescent girls to adequate nutrition is crucial. Their health and education must be improved. Women should be given the opportunity to participate in the decision-making process and to have increased access to and control of resources. It is particularly important to provide family planning services to both men and women and to provide support for women, especially working women, whether paid or unpaid, throughout pregnancy and breast-feeding and during the early childhood period. Men should also be motivated through appropriate education to assume an active role in the promotion of nutritional well-being.

14. Food aid may be used to assist in emergencies, to provide relief to refugees and displaced persons and to support household food security and community and economic development. Countries receiving emergency food aid should be provided with sufficient resources to enable them to move on from the rehabilitation phase to development, so that they will be in a position to cope with future emergencies. Care must be taken to avoid creating dependency and to avoid negative impacts on food habits and on local food production and marketing. Before food aid is reduced or discontinued, steps should be taken to alert recipient countries as much in advance as possible so that they can identify alternative sources and implement other approaches. Where appropriate, food aid may be channelled through NGOs with local and popular participation, in accordance with the domestic legislation of each country.

15. We reaffirm our obligations as nations and as an international community to protect and respect the need for nutritionally adequate food and medical supplies for civilian populations situated in zones of conflict. We affirm in the context of international humanitarian law that food must not be used as a tool for political pressure. Food aid must not be denied because of political affiliations, geographic location, gender, age, ethnic, tribal or religious identity.

16. We recognize the fact that each government has the prime responsibility to protect and promote food security and the nutritional well-being of its people, especially the vulnerable groups. However, we also stress that such efforts of low-income countries should be supported by actions of the international community as a whole. Such actions should include an increase in official development assistance in order to reach the accepted United Nations target of 0.7 percent of the GNP of developed

countries as reiterated at the 1992 United Nations Conference on Environment and Development.[1] Also, further renegotiation or alleviation of external debt could contribute in a substantive manner to the nutritional well-being in medium-income countries as well as in low-income ones.

17. We acknowledge the importance of further liberalization and expansion of world trade, which would increase foreign exchange earnings and employment in developing countries. Compensatory measures will continue to be needed to protect adversely affected developing countries and vulnerable groups in medium- and low-income countries from negative effects of structural adjustment programmes.

18. We reaffirm the objectives for human development, food security, agriculture, rural development, health, nutrition and environment and sustainable development enunciated in a number of international conferences and documents.[2] We reiterate our commitment to the nutritional goals of the Fourth United Nations Development Decade and the World Summit for Children.

19. As a basis for the Plan of Action for Nutrition and guidance for formulation of national plans of action, including the development of measurable goals and objectives within time frames, we pledge to make all efforts to eliminate before the end of this decade:

- famine and famine-related deaths
- starvation and nutritional deficiency diseases in communities affected by natural and man-made disasters;
- iodine and vitamin A deficiencies.

We also pledge to reduce substantially within this decade:

- starvation and widespread chronic hunger;
- undernutrition, especially among children, women and the aged;
- other important micronutrient deficiencies, including iron;
- other related communicable and non-communicable diseases;
- social and other impediments to optimal breast-feeding;
- inadequate sanitation and poor hygiene, including unsafe drinking water.

20. We resolve to promote active cooperation among governments, multilateral, bilateral and non-governmental organizations, the private sector, communities and individuals to eliminate progressively the causes that lead to the scandal of hunger and all forms of malnutrition in the midst of abundance.

21. With a clear appreciation of the intrinsic value of human life and the dignity it commands, we adopt the attached Plan of Action for Nutrition and affirm our determination to revise or prepare, before the end of 1994, our national plans of action, including attainable goals and measurable targets, based on the principles and relevant strategies in the attached Plan of Action for Nutrition. We pledge to implement it.

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[1] "Developed countries reaffirm their commitments to reach the accepted United Nations target of 0.7 percent of GNP for ODA and, to the extent that they have not yet achieved that target, agree to augment their aid programmes in order to reach that target as soon as possible and to ensure prompt and effective implementation of Agenda 21. Some countries have agreed to reach the target by the year 2000. . . . Those countries that have already reached the target are to be commended and encouraged to continue to contribute to the common effort to make available the substantial additional resources that have to be mobilized. Other developed countries, in line with their support for reform efforts in developing countries, agree to make their best efforts to increase their level of ODA. . . ." (Report of United Nations Conference on Environment and Development, Rio de Janeiro, 1992, paragraph 33.13).

[2] The World Food Conference, 1974; the Alma Ata Conference on Primary Health Care, 1978; the World Conference on Agrarian Reform and Rural Development, 1979; the Convention on the Elimination of All Forms of Discrimination Against Women, 1979, especially articles 12 and 13; the Innocenti Declaration on the Protection, Promotion and Support of Breastfeeding, 1990; the Montreal Policy Conference on Micronutrient Malnutrition, 1991; the Rio Declaration on Environment and Development, 1992.

ANNEX 10: OTTAWA CHARTER FOR HEALTH PROMOTION (1986)

HEALTH PROMOTION

Health promotion is the process of enabling people to increase control over, and to improve, their health. To reach a state of complete physical, mental and social well-being, an individual or group must be able to identify and to realize aspirations, to satisfy needs, and to change or cope with the environment. Health is, therefore, seen as a resource for everyday life, not the objective of living. Health is a positive concept emphasizing social and personal resources, as well as physical capacities. Therefore, health promotion is not just the responsibility of the health sector, but goes beyond healthy life-styles to well-being.

PREREQUISITES FOR HEALTH

The fundamental conditions and resources for health are:

- peace,
- shelter,
- education,
- food,
- income,
- a stable eco-system,
- sustainable resources,
- social justice,
- equity.

Improvement in health requires a secure foundation in these basic prerequisites.

ADVOCATE

Good health is a major resource for social, economic and personal development and an important dimension of quality of life. Political, economic, social, cultural, environmental, behavioural and biological factors can all favour health or be harmful to it. Health promotion action aims at making these conditions favourable through **advocacy** for health.

ENABLE

Health promotion focuses on achieving equity in health. Health promotion action aims at reducing differences in current health status and ensuring equal opportunities and resources to enable all people to achieve their fullest health potential. This includes a secure foundation in a supportive environment, access to information, life skills and opportunities for making healthy choices. People cannot achieve their fullest health potential unless they are able to take control of those things which determine their health. This must apply equally to women and men.

MEDIATE

The prerequisites and prospects for health cannot be ensured by the health sector alone. More importantly, health promotion demands coordinated action by all concerned: by governments, by health and other social and economic sectors, by nongovernmental and voluntary organization, by local authorities, by industry and by the media. People in all walks of life are involved as individuals, families and communities. Professional and social groups and health personnel have a major responsibility to **mediate** between differing interests in society for the pursuit of health

Health promotion strategies and programmes should be adapted to the local needs and possibilities of individual countries and regions to take into account differing social, cultural and economic systems.

HEALTH PROMOTION ACTION MEANS:

BUILD HEALTHY PUBLIC POLICY

Health promotion goes beyond health care. It puts health on the agenda of policy makers in all sectors and at all levels, directing them to be aware of the health consequences of their decisions and to accept their responsibilities for health.

Health promotion policy combines diverse but complementary approaches including legislation, fiscal measures, taxation and organizational change. It is coordinated action that leads to health, income and social policies that foster greater equity. Joint action contributes to ensuring safer and healthier goods and services, healthier public services, and cleaner, more enjoyable environments.

Health promotion policy requires the identification of obstacles to the adoption of healthy public policies in non-health sectors, and ways of removing them. The aim must be to make the healthier choice the easier choice for policy makers as well.

CREATE SUPPORTIVE ENVIRONMENTS

Our societies are complex and interrelated. Health cannot be separated from other goals. The inextricable links between people and their environment constitutes the basis for a socio-ecological approach to health. The overall guiding principle for the world, nations, regions and communities alike, is the need to encourage reciprocal maintenance - to take care of each other, our communities and our natural environment. The conservation of natural resources throughout the world should be emphasized as a global responsibility.

Changing patterns of life, work and leisure have a significant impact on health. Work and leisure should be a source of health for people. The way society organizes work should help create a healthy society. Health promotion generates living and working conditions that are safe, stimulating, satisfying and enjoyable.

Systematic assessment of the health impact of a rapidly changing environment -particularly in areas of technology, work, energy production and urbanization - is essential and must be followed by action to ensure positive benefit to the health of the public. The protection of the natural and built environments and the conservation of natural resources must be addressed in any health promotion strategy.

STRENGTHEN COMMUNITY ACTION

Health promotion works through concrete and effective community action in setting priorities, making decisions, planning strategies and implementing them to achieve better health. At the heart of this process is the empowerment of communities - their ownership and control of their own endeavours and destinies.

Community development draws on existing human and material resources in the community to enhance self-help and social support, and to develop flexible systems for strengthening public participation in and direction of health matters. This requires full and continuous access to information, learning opportunities for health, as well as funding support.

DEVELOP PERSONAL SKILLS

Health promotion supports personal and social development through providing information, education for health, and enhancing life skills. By so doing, it increases the options available to people to exercise more control over their own health and over their environments, and to make choices conducive to health.

Enabling people to learn, throughout life, to prepare themselves for all of its stages and to cope with chronic illness and injuries is essential. This has to be facilitated in school, home, work and community settings. Action is required through educational, professional, commercial and voluntary bodies, and within the institutions themselves.

REORIENT HEALTH SERVICES

The responsibility for health promotion in health services is shared among individuals, community groups, health professionals, health service institutions and governments. They must work together towards a health care system which contributes to the pursuit of health.

The role of the health sector must move increasingly in a health promotion direction, beyond its responsibility for providing clinical and curative services. Health services need to embrace an expanded mandate which is sensitive and

respects cultural needs. This mandate should support the needs of individuals and communities for a healthier life, and open channels between the health sector and broader social, political, economic and physical environmental components.

Reorienting health services also requires stronger attention to health research as well as changes in professional education and training. This must lead to a change of attitude and organization of health services which refocuses on the total needs of the individual as a whole person.

MOVING INTO THE FUTURE

Health is created and lived by people within the settings of their everyday life; where they learn, work, play and love. Health is created by caring for oneself and others, by being able to take decisions and have control over one's life circumstances, and by ensuring that the society one lives in creates conditions that allow the attainment of health by all its members.

Caring, holism and ecology are essential issues in developing strategies for health promotion. Therefore, those involved should take as a guiding principle that, in each phase of planning, implementation and evaluation of health promotion activities, women and men should become equal partners.

COMMITMENT TO HEALTH PROMOTION

The participants in this Conference pledge:

- to move into the arena of healthy public policy, and to advocate a clear political commitment to health and equity in all sectors;
- to counteract the pressures towards harmful products, resource depletion, unhealthy living conditions and environments, and bad nutrition; and to focus attention on public health issues such as pollution, occupational hazards, housing and settlements;
- to respond to the health gap within and between societies, and to tackle the inequities in health produced by the rules and practices of these societies;
- to acknowledge people as the main health resource; to support and enable them to keep themselves, their families and friends healthy through financial and other means, and to accept the community as the essential voice in matters of its health, living conditions and well-being;
- to reorient health services and their resources towards the promotion of health; and to share power with other sectors, other disciplines and, most importantly, with people themselves;
- to recognize health and its maintenance as a major social investment and challenge; and to address the overall ecological issue of our ways of living.

The Conference urges all concerned to join them in their commitment to a strong public health alliance.

CALL FOR INTERNATIONAL ACTION

The Conference calls on the World Health Organization and other international organizations to advocate the promotion of health in all appropriate forums and to support countries in setting up strategies and programmes for health promotion.

The Conference is firmly convinced that if people in all walks of life, nongovernmental and voluntary organizations, governments, the World Health Organization and all other bodies concerned join forces in introducing strategies for health promotion, in line with the moral and social values that form the basis of this CHARTER, Health For All by the year 2000 will become a reality.

CHARTER ADOPTED AT AN INTERNATIONAL CONFERENCE
ON HEALTH PROMOTION

The move towards a new public health
November 17-21, 1986 Ottawa, Ontario, Canada

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